

PRELIMINARY EXAMINATIONS – 2016  
General Certificate of Education Advanced Level  
Higher 2

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**ECONOMICS**

**9732/01**

Paper 1

**30 August 2016**

**2 hours 15 minutes**

Additional Materials:      Answer Paper

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**READ THESE INSTRUCTIONS FIRST**

Write your name and class on all the work you hand in.

Write in dark blue or black pen on both sides of the paper.

You may use a soft pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

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This document consists of 7 printed and 1 blank pages.

**[Turn Over]**

Answer all questions.

### Question 1 The UK Telecommunications Industry

Telecommunications companies compete by offering more attractive terms to their customers. Table 1 compares the features and prices of mobile plans offered by different companies within the UK.

**Table 1: Mobile plans by UK telecommunications companies**

Company		Giffgaff	O2	Three Mobile	Tesco Mobile
Mobile plan features	Minutes of talk time	250	250	200	250
	Number of SMS	Unlimited	Unlimited	Unlimited	5000
	Data allowance	500 MB	250 MB	500 MB	500 MB
Price per month		£7.50	£10.00	£11.00	£7.50

Source: USwitch.com, 2014

**Table 2: Selected statistics for Giffgaff, 2012-2014**

Year	2012	2013	2014
Profit (£ millions)	-29	2	8
Customers (thousands)	795	1200	1594

Source: Giffgaff, 2015

#### Extract 1: Giffgaff proves your customers can run your business for you

In 2014, Giffgaff, the mobile phone network run by its customers, acquired another 400,000 members last year. Giffgaff is a 'virtual' operator: it operates online only.

Giffgaff is a telecommunications company built by its parent company, O2, another telecommunications company, despite the saturated nature of the UK telecommunications industry. It runs on O2's existing network infrastructure, but is operated by a different management team. Unlike Giffgaff, O2 primarily operates through physical stores, and charges higher for similar mobile phone plans. The last of the 'virtual' operators to come to market, Giffgaff – launched as an experiment in 2009 by O2 – has overtaken almost 160 others by promising low prices, no contracts, and fair treatment of customers.

Giffgaff incentivises its members to provide customer service to other customers by paying them: the more value you bring to the business, the more money you will make. Existing Giffgaff members are paid for introducing new users to Giffgaff, or for helping to answer queries on Giffgaff's online forums. To date, Giffgaff has paid out £11 million to members for their services, and does not operate a customer service hotline, unlike its parent company, O2. This system seems to work: Giffgaff says that the average response time for questions is just three minutes, day or night.

Source: Telegraph UK, 2015

### **Extract 2: Quality of mobile coverage poor in rural UK despite saturated industry**

Some 78% of people in urban areas were satisfied with their mobile network, compared with 67% in rural parts of UK, says Ofcom, the regulatory authority in the UK for the telecommunications industry. Partial 'not-spots', where there is coverage from some but not all of the mobile networks, affected a fifth of the UK, leaving people unable to make calls or send text messages when they are not on the right network. Because of such problems, people in rural areas of UK frequently stick to alternatives such as fixed line phone services (delivered through wires connected to homes).

Masts in urban areas cannot serve rural areas due to the large distances involved. To be covered effectively by mobile networks, investment in infrastructure must be undertaken in rural areas. Masts, which are tall and large fixed structures designed to support antennas for telecommunications, must be constructed near the region that is served by the mobile networks for mobile phone users to make calls or send text messages.

Source: BBC News, 2014

### **Extract 3: UK Government announces deal to improve mobile coverage across rural UK**

The UK Government has secured a deal with four leading mobile networks to improve mobile coverage across the UK, partially for greater fairness. The terms of the agreement include:

- Embarking on a £5 billion investment programme to improve mobile infrastructure by 2017;
- Guaranteed voice and text coverage from each operator across 90 per cent of the UK geographic area by 2017, halving the areas currently suffering from patchy coverage as a result of partial mobile coverage in certain rural areas;
- Provide reliable signal strength for all mobile services – this will enable consumers to receive mobile signals long enough to complete a mobile phone call; and
- Make the deal legally binding – it will be enforceable by Ofcom.

No direct cash payments will be made by the UK Government to the mobile networks as part of this agreement. To tackle 'not-spots', the UK Government has provided £150 million to develop infrastructure to increase mobile coverage in rural areas. This decreases the expenses incurred by firms operating in rural areas. An executive of O2 commented, "A partnership between government and the mobile operators is required to maximise coverage across the UK, so this agreement is a good outcome for our customers. It will support investment in our network, while ensuring that strong competition remains between the different networks."

Source: UK Government, 2014

### **Extract 4: Three Mobile promises mobile coverage to rural areas if merger with O2 approved**

Three Mobile has promised to get mobile coverage into rural areas with no reception and reach 99 per cent of customers if its £10.5 billion merger with O2 gets the thumbs-up. Its Chief Executive said that by sharing masts, Three and O2 will reach areas known as 'not-spots', where mobile and internet signals are poor. The suggestion is the latest by Three as it tries to secure approval from Ofcom, which has spoken out against the deal because it will reduce competition. If the deal goes ahead, Three has also pledged cheap mobile plans for pensioners, offering calls and text bundles for £5 a month.

Ofcom has set a target for mobile operators to reach 90 per cent of geographical coverage of the UK by 2017 – which Three says it will surpass if it merges with O2. The Chief Executive of Three says: "There are some really exciting things for UK consumers that stand to come out of this. Coverage is a fairly regular topic of conversation, in terms of not being able to get signal at home or in a field when you're walking the dog. Coverage of 99 per cent is a very

significant number. It's in excess of what O2 has today. Putting the two companies together will definitely surpass the target of 90 per cent geographic coverage the Government has set."

O2 and Three are the second and the fourth largest mobile network operators in the UK respectively, but combined they would become the biggest in the market, with 31 million customers. A takeover would reduce the number of large mobile network providers in the UK from four to three. The deadline for the decision on the merger is soon. Three's Chief Executive commented: "We are getting towards the end of the process; I'm excited that we will be hearing the decision quite soon."

Source: The Daily Mail, March 2016

#### Extract 5: Merger between Three and O2 blocked

Three was a magic number. At least, that was what mobile-phone operators and regulators in believed a few years ago. Letting just three dominant rival companies compete inside each national market would supposedly produce decent outcomes. Customers would benefit from enough competition; firms, despite mature markets with already high penetration rates, would get profits plump enough to allow them to invest in infrastructure, such as for rolling out better quality 4G and 5G services.

However, such conventional wisdom is being questioned. Last week, the merger of British telecommunication companies, Three Mobile and O2, was blocked. Ofcom, Britain's communications regulator, was anxious that a lack of competition would hurt consumers and businesses.

Ofcom's own research in 25 countries shows that average prices were up to one-fifth lower in markets with four network operators than in those with three. As for spending on networks, analysis from Ofcom has also found "no link between a higher concentration in mobile markets and an increase in investment".

Some in the industry are dismayed. "Both EU and UK regulators seem only concerned with pricing and don't think of the bigger picture," complains the head of a telecommunications consultancy firm. He believes that mergers of mobile companies will offer lots of efficiencies that create win-win situations for both consumers and mobile companies.

Source: Telegraph UK and The Economist, May 2016

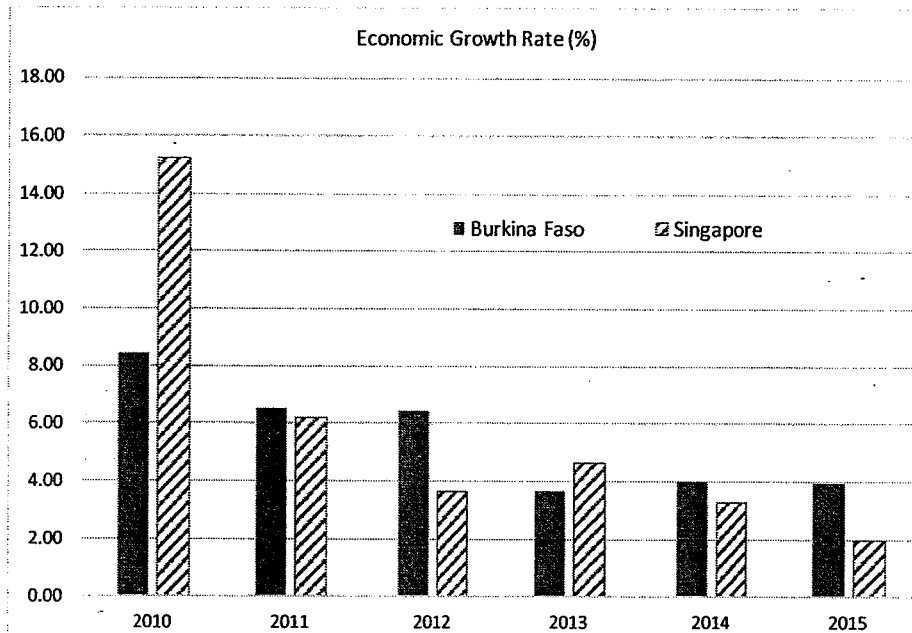
#### Questions

- 1 (a) Based on Table 1, which is the most competitive telecommunications company in the UK? Justify your answer. [2]
- (b) Why might a telecommunications company such as O2 want to set up a second telecommunications company such as Giffgaff? [4]
- (c) Explain how the difficulty in deploying masts in urban areas to serve rural areas (Extract 2) is a case of factor immobility. [2]
- (d) Analyse the impact of developments in Extract 3 on the extent of change in sales volume of mobile plans in rural UK. [8]
- (e) Explain **two** reasons why a lack of competition in the UK telecommunications industry will "hurt consumers" (Extract 5). [4]
- (f) Evaluate the factors that likely determined why the UK Government blocked the merger between Three and O2. [10]

[Total: 30]

## Question 2 Economic Opportunities and Challenges for Singapore and Africa

**Figure 1: Economic Growth Rate 2010 – 2015**



Source: World Bank

**Table 3: GDP per capita (current US\$) 2010 – 2015**

Country	2010	2011	2012	2013	2014
Burkina Faso	574.5	665.8	673.0	709.1	713.5
Singapore	46,569	53,093	54,451	55,617	56,007

Source: World Bank

### Extract 6: Africa still important for Singapore investments

Two African countries have signed investment treaties with Singapore to open up more bilateral business and investment opportunities. One of which is the Burkina Faso-Singapore bilateral investment treaty. The agreements aim to protect the interests of investors from the countries involved and to increase investment flows between Singapore and the two African countries. Singapore-based Olam International, for example, may stand to benefit from such an agreement as it seeks more investments in Africa. Olam will be specializing in crops used for Burkina Faso's exports such as sesame, shea nuts, cotton and ground nuts. Singapore's bilateral trade with Burkina Faso rose 15 per cent between 2012 and last year to \$2.54 million.

"The recently signed treaty between both countries has not come into force as it is pending ratification. In light of the recent political unrests in Burkina Faso, we expect a delay in the ratification process," a spokesperson of the Ministry of Trade and Industry told TODAY.

Chief operating officer of Singapore Business Federation (SBF) Mr Victor Tay agreed, saying: "Burkina Faso is just one of Africa's 53 countries, and most of them remain politically stable. Over 10 of our members are currently operating in the country, and none of them have left."

"Like investing in BRICs, the potential of Africa is a long term picture, and I don't expect the recent incident to cast a looming shadow over that outlook," he said.

Burkina Faso is one of the several countries in Africa, which is seeing very rapid economic growth on the back of its huge population and rich natural resources. The International Monetary Fund has projected last month a 5.75 per cent GDP growth for sub-Saharan Africa next year despite the shocks of Ebola outbreak.

This will mean opportunities for Singapore companies to export expertise in areas such as logistics, urban solutions and human resources to the rapidly developing economies there, Deputy Prime Minister Mr Tharman Shanmugaratnam noted during the Africa-Singapore Business Forum in August.

Source: Todayonline, 10 November 2014

### **Extract 7: Tap Africa for business opportunities**

Singapore firms have been encouraged to seize business opportunities in fast-emerging Africa as global economic trends favour the continent. Deputy Prime Minister Tharman Shanmugaratnam suggested that Africa could present major openings as production costs rise in China's transformed economy.

"China has dominated manufacturing, particularly low-cost manufacturing, but China is becoming much more expensive and wages are rising quickly – they're trying to move up the value curve as well," he said yesterday. As a result, many companies are shifting manufacturing out of China – a trend that Africa, with its rapidly growing middle-class consumer market, should capitalise on, he said.

Singapore companies have a role to play in Africa's future too, especially in areas such as port and airport services and urban solutions, such as in water and waste treatment, which Singapore has a lot of experience in, Mr Tharman said.

Standard Chartered Bank's CEO for Europe, the Middle East, Africa and the Americas, Mr V. Shankar, told The Straits Times on the sidelines of the forum that companies considering doing business in Africa tend to worry about the security issues there, the lack of infrastructure and the "sheer pain" of getting to the continent.

Singapore's trade with Africa has grown at a compound annual rate of close to 12 per cent over the past five years, reaching \$14 billion last year. Investments by Singapore firms have reached \$20 billion to date.

Source: The Straits Times, 28 August 2014

### **Extract 8: Singapore retains spot as second-most competitive economy**

Singapore retained its position as the world's second-most competitive economy this year despite concerns about business costs and tightening labour policies, according to the World Economic Forum (WEF) yesterday.

The WEF said Singapore fared well across all 12 factors assessed in the study, such as infrastructure, health and education, and technological readiness. The country scored especially well in terms of goods and labour market efficiency and financial market development, it added. "Singapore possesses world-class infrastructure, with excellent roads, ports and air transport facilities," the WEF said. "Its economy can also rely on a sound macroeconomic environment and fiscal management – its budget surplus amounted to 6.9 per cent of GDP in 2013."

The WEF said Singapore's competitiveness is enhanced by its strong focus on education, which has translated into a steady improvement in higher education and training. Singapore's private sector is also becoming increasingly sophisticated and more innovative, the WEF

added, "although room for improvement exists in both areas, which are the keys to Singapore's future prosperity".

These are also the two areas in which top-ranked Switzerland does particularly well. "Switzerland's top-notch scientific research institutions, along with other factors, make the country a top innovator," said the WEF.

"Productivity is further enhanced by a business sector that offers excellent on-the-job training opportunities, both citizens and private companies that are proactive at adapting the latest technologies, and labour markets that balance employee protection with business efficiency."

The report comes as the global economy seems to be finally leaving behind the worst crisis of the past 80 years. But the WEF said the recovery is moving at a less decisive pace than it has after previous downturns.

Mizuho economist Vishnu Varathan said the Swiss approach shows that the Singapore Government's productivity push is necessary. Efforts to narrow the income gap and improve social mobility could also help Singapore score better in such international studies, he added. Singapore has been strengthening social safety nets for years, especially for healthcare and retirement adequacy for low income workers and retirees who do not qualify for the Pioneer Generation Package, and pensioners.

CIMB economist Song Seng Wun, however, said that Singapore should be more concerned about the possibility of slipping in the rankings.

"Giving businesses access to the resources that they need will still be the main challenge going forward," he said. "The risk of a policy misstep from a further tightening of labour policy could cause businesses to change their minds about Singapore. That, to me, is the higher possibility than for us to move up to No. 1."

Source: The Straits Times, 04 Sep 2014

### Questions

- 2 (a) Using Figure 1, compare the growth performance of Burkina Faso and Singapore over the period 2010 to 2015. [2]
- (b) Explain how GDP and living standards are related. [2]
- (c) Explain how the political unrest mentioned in Extract 6 might affect other African nations negatively. [3]
- (d) Using Extract 7, explain the type of inflation China is facing which could have led to companies shifting out of China. [2]
- (e) Using a diagram, explain how an influx of foreign direct investments may affect Burkina Faso's currency exchange rate. [3]
- (f) With reference to the data, comment on how the pattern of trade between Singapore and Africa may change over time. [8]
- (g) In Extract 8, the WEF said that Singapore's competitiveness is enhanced by its strong focus on education. Assess whether Singapore should rely primarily on a steady improvement in higher education and training to achieve sustained economic growth. [10]

[Total: 30]

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Answer all questions.

### Question 1

#### The UK Telecommunications Industry

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Source: Telegraph UK and The Economist, May 2016

### Questions

- (a) Based on Table 1, which is the most competitive telecommunications company in the UK? Justify your answer. [2]
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- (c) Explain how the difficulty in deploying masts in urban areas to serve rural areas (Extract 2) is a case of factor immobility. [2]
- (d) Assess the impact of developments in Extract 3 on the extent of change in sales volume of mobile plans in rural UK. [8]
- (e) Explain **two** reasons a lack of competition in the UK telecommunications industry will 'hurt consumers' (Extract 5). [4]
- (f) Evaluate the factors that likely determined why the UK Government blocked the merger between Three and O2. [10]

[Total: 30]

## Suggested Answers and Mark Scheme

**(a) Based on Table 1, which is the most competitive telecommunications company in the UK? Justify your answer. [2]**

*1m for identifying company and 1m for reason.*

Giffgaff. [1] Among the four providers in Table 1, Giffgaff's mobile plan provides the best features (in terms of talktime, SMS, mobile data) at the lowest price. [1]

### Examiners' overall comments:

- Most candidates received the full 2 marks; only a handful of candidates did not manage to identify Giffgaff as the most competitive telecommunications company.
- Some candidates did not attain the 2<sup>nd</sup> mark because they did not compare Giffgaff with all telecommunications companies (e.g. only compared with Tesco Mobile). Others did not attain the 2<sup>nd</sup> mark because they did not compare on both the basis of price as well mobile plan features.

**(b) Why might a telecommunications company such as O2 want to set up a second telecommunications company such as Giffgaff? [4]**

*Up to 2m for each of the two best reasons explained. 1m for reason, and 1m for link towards total revenue/total cost and therefore profits. Cap at 3m if 2 revenue advantages OR 2 cost advantages explained.*

### Possible reasons:

- **Revenue advantages**
  - As a way of discriminating between individuals whose demand for mobile services is more price inelastic (served by O2; possibly groups with higher income) and those whose demand is more price elastic (served by lower priced Giffgaff; possibly groups with lower income and therefore may search extensively for bargains) to increase revenue and, therefore, profits.
  - As a method of non-price competition: Giffgaff promises no contracts and fair treatment of its customers, and a quick response time to questions posed online. This may increase the demand for telecommunications services, increasing revenue and, therefore, profits, *ceteris paribus*.
  - To diversify its product offering and increase market share: Giffgaff is aimed at tech-savvy customers who may want prompt customer service online. This can increase the firm's demand, and, therefore, profits.
- **Cost advantages**
  - Giffgaff runs on O2's existing network infrastructure and such infrastructure can be better utilised with more customers on a network. As output increases, AFC falls. This increases the profitability of O2.
  - To reap internal (marketing) economies of scale. Due to the increased scale of production, Giffgaff and O2 may purchase mobile phones from mobile phone companies at lower cost; as output increases, LRAC falls. This increases the profitability of O2.

Do not accept managerial economies of scale because Giffgaff is a separate firm. Accept answers that understand that O2 is still the parent company of Giffgaff – definition of 'firm' up to students to define. For an answer that only provides multiple explained examples of internal EOS, cap at 3m (no revenue advantages).

Examiners' overall comments:

- Most candidates understood that this question required them to consider the firm's point-of-view.

**Skills related issues:**

- No introduction is required for short questions – avoid wasting precious time.
- Since firms can be assumed to be profit-maximising, and profits = TR – TC, it is a useful approach to consider both revenue and cost side factors separately. This will ensure sufficient breadth of your answer.
- When referencing costs of a firm, please be specific – you should clearly identify whether you are referring to total costs or average costs, and fixed costs or variable costs.

**Content related issues:**

- Usage of existing network infrastructure owned by O2 is not an example of internal (technical) economies of scale because the scale of production is not increased. This advantage can be explained in terms of a fall in AFC.
- There was some confusion between prices and cost. Price refers to the dollar value of the transaction in the goods market. Cost refers to the dollar value of what a firm pays for factors of production used in the production of the good.

**(c) Explain how the difficulty in deploying masts in urban areas to serve rural areas (Extract 2) is a case of factor immobility. [2]**

*1m for identifying this as a case of geographical immobility OR defining factor immobility, and 1m for elaboration. No credit for explaining how factor immobility leads to market failure.*

Factor immobility occurs when it is difficult to employ factors of production for other uses. The difficulty in employing masts in urban areas to serve rural areas is a case of geographical immobility [1] because masts are tall and large fixed structures (Extract 2) that are unable to be easily moved to a different location [1].

**Examiners' overall comments:**

- For full marks, candidates had to demonstrate understanding of the concept of factor immobility.
- The issue is not about the inability of masts situated in urban areas in serving rural areas; the issue in question is about the movement of such masts.
- Answers referencing the building of masts were also not accepted because this was not asked about in the question.
- A good answer would ideally show some understanding of the definition of factor immobility.

**(d) Analyse the impact of developments in Extract 3 on the extent of change of sales volume of mobile plans in rural UK. [8]**

*Suggested approach: Consider which direction equilibrium quantity of mobile plans changes in via demand/supply analysis. Extent/magnitude of change may be discussed via PED/PES values.*

**Direction of change:**

- DD factor:
  - Reliable signal strength (Extract 3) leads to an increase in DD because of changes in tastes and preferences/improvement in quality of services.
- SS factor:

- UK Government providing £150 million to develop infrastructure (Extract 3) decreases COP of firms operating in rural UK, increasing SS.
- Overall: Since DD increases and SS increases, equilibrium quantity (sales volume) of mobile plans rises unambiguously.

#### Magnitude of change:

- $|PED|$  likely  $> 1$ 
  - Substitutes available to mobile phone usage such as fixed line phone services (Extract 2). When SS increases, there will be a small decrease in price and large increase in equilibrium quantity.
  - There is likely to be a **large** increase in equilibrium quantity.
- PES likely  $< 1$ 
  - Factor immobility in the telecommunications industry (from (c)).
  - Impossible to divert FOP such as masts from one location to another to increase output in rural UK. Price changes will lead to less than proportionate changes in quantity supplied.
  - There is likely to be a **small** increase in equilibrium quantity.

#### Possible evaluative comments:

- Combination of both demand and supply changes will lead to a large change in equilibrium quantity.
  - Even though  $PES < 1$ , limiting the extent of increase in equilibrium quantity due to demand increases, there exists a simultaneous increase in supply, and  $|PED|$  likely to be  $> 1$ .
- PED and PES likely to change in long-run.
  - Government may build new infrastructure in rural areas, increasing PES.
  - Spending habits may change in the long-run when consumers start realising the changes in the quality of mobile services, increasing magnitude of PED.
  - More likely that there are larger increases in equilibrium quantity in the LR.
- Overall increase in sales volume also depends on how much DD and SS increase by.
  - Substantial reduction in COP by the UK Government, which is likely to lead to a large increase in SS.
  - Increase in DD may take time, because tastes and preferences do not change overnight. Information about mobile service quality is not obtained immediately.

Level	Knowledge, Understanding, Application and Analysis
L3 (5 – 6)	For an answer that provides a detailed and analytic explanation of the impact of the developments on sales volume. Answer should contain considerations of elasticities.
L2 (3 – 4)	For an underdeveloped explanation about the impact of the developments on sales volume. If the extent of increase of sales volume is not considered, max L2.

L1 (1 – 2)	For an answer that shows some knowledge of demand and supply factors based on the developments in Extract 3, and/or for an answer that does not use the developments in Extract 3 at all.
E2 (2)	For an answer that uses analysis to support a judgement about the impact of the developments on the extent of change of sales volume. Judgement must directly address the 'extent' of change.
E1 (1)	For an unsupported judgement about the impact of the developments on the extent of change in sales volume. Judgement must directly address the 'extent' of change.

**Examiners' overall comments:**

- There was a wide range of responses to this question. Most often, what determined whether candidates were able to do well was if candidates were able to identify a suitable economic model to use (in this case, the demand/supply model).
- The question clearly referenced the 'extent of change', suggesting considerations of price elasticities of demand and supply were necessary.
- Sales volume is quantity, not total revenue. This was a very common misinterpretation of the question.

**Skills related issues:**

- Since the question referenced the 'extent of change', a good answer should reference both the direction and magnitude of changes in quantity.
- Use contextual material to substantiate changes in demand and supply, and PED and PES values. Sometimes, earlier questions can provide hints for subsequent questions. In this CSQ, part (c) suggested that there was factor immobility present, and therefore PES may be  $< 1$ .

**Content related issues:**

- Many candidates were unable to relate a fall in cost of production to a rise in supply. These candidates immediately linked a fall in cost of production to a fall in price. This reduced the level of analysis.
- XED cannot be used in this case because there are no changes in the prices of related goods.
- This question focused on mobile plans in the entire market; not just that of one firm. It is inappropriate to justify the PED value as  $> 1$  based on the 'availability of substitutes' due to the existence of more than 1 firm.

**(e) Explain two reasons a lack of competition in the UK telecommunications industry will 'hurt consumers' (Extract 5). [4]**

*Up to 2m for each way consumers may be affected, up to a maximum of 4m.*

Impact on consumers should be explained in terms of price (linked to consumer surplus), choice or quality. **Positive impacts will not be accepted.**

Possible impacts:

- Three and O2 will become the largest firm in the market after merger. (Extract 4) This raises their market power, enabling them to raise prices to increase profits in future. This will reduce consumer surplus.
- With fewer firms in the market, the choice of mobile plans may be reduced (i.e. will not see the variety of combinations of different features seen in Table 1). Therefore, consumers may be negatively affected.

- With an even larger market share, the merged company may not see a need to continually innovate to provide better quality services to its customers. This reduces any potential improvement in quality that firms may undertake to provide as a form of non-price competition.

**Examiners' overall comments:**

- Most candidates were able to identify areas of concern to consumers (price, choice, quality) when there was a lack of competition. However, the quality of these explanations differed greatly.
- Candidates should consider more than one way that consumers are affected. For example, if both points raised were related to prices, then this was only considered one aspect and therefore one way consumers were negatively affected.
- Answers should clearly distinguish whether consumers are hurt because quality and choice worsens, or whether they are hurt because of no improvement in quality and choice.

**Skills related issues:**

- Again, no introduction is required for short questions.
- Do not explain how competition benefits consumers when the question asks you to consider how a lack of competition hurts consumers.
- Apply the context given. For example, when considering choice, explain precisely what lower choice means in the context given.

**Content related issues:**

- X-inefficiency is a different issue to innovation and dynamic efficiency. X-inefficiency is about complacency about costs, not about whether they will innovate or not.
- This question focuses on consumers; if candidates offered how areas of performance of the firms and society were affected, these were not accepted.
- Quality is not the same as choice. Do not mix them up.

**(f) Evaluate the factors that likely determined why the UK Government blocked the merger between Three and O2. [10]**

*Suggested approach: Identify factors that are relevant for government decision making, and elaborate/provide examples of how it may choose between blocking the merger or not. An assessment can then be made about the importance of the factors.*

**Possible factors, and why they are important:**

- **Relative extent of market failure** from inequity (unfairness of poor mobile coverage in rural UK referenced in Extract 3) and inefficiency due to market dominance – affects choice between allowing Three and O2 to merge, and to block the merger. Important because the government has to decide which market failure to prioritise – competing objectives of efficiency and equity. If the UK Government decides that guaranteed coverage of 90% of UK is a fair enough level, compared to the 99% offered by Three and O2, then they may block the merger. Otherwise, they may approve the merger.
  - This point may instead be expressed in terms of the relative extent of market failure arising from factor immobility and market dominance. From the government's response of blocking the merger, it seems to have judged that the additional social benefit of raising mobile phone coverage from 90% to 99% of UK is less than the additional opportunity cost to society – that there will be increased market dominance and therefore a larger deadweight loss in the telecommunications industry.



- **Feasibility** – affects choice between the government undertaking infrastructure development, or the private sector undertaking such development. Important because if the government's budget balance is in a persistent deficit, undertaking large government expenditure may not be an option and the UK Government may thus choose to approve the merger between Three and O2 instead. However, if the UK Government deems that its budget position is healthy, it may choose to block the merger and undertake the infrastructure development via government expenditure.
- **Side-effects/trade-offs** – allowing or disallowing firms to merge depends on the efficiencies they generate too. If a firm is not allowed to merge, efficiencies that may be generated (e.g. productive efficiency due to increased internal EOS reaped and dynamic efficiency due to product/process innovation that may be carried out due to increased supernormal profits) when firms are large may not be reaped. If the government deems that allowing firms to merge may lead to improvements in productive and dynamic efficiency, then it may choose instead to approve the merger between Three and O2. If these positive side-effects the merger generates are limited, then they may choose not to approve the merger between Three and O2. The UK Government may have considered that the latter is likely to be the case because investment in infrastructure was limited, and less competition is likely to reduce the incentive for such investment.
- **Time period** – The government may consider both the short-term and long-term impact of a merger between Three and O2. Although it has been promised that the geographical coverage of mobile services will increase, and cheap mobile phone plans for pensioners, these benefits (from society's point of view) may be more than costs in the short-term. In the long-term, Three and O2 may exploit their increased market power to raise prices to increase profits. This will increase deadweight loss due to market dominance in the long-term.
- Etc... Accept any reasonable factor.

**Possible overall evaluation:**

(Make a judgement about what factors are likely to be more important than others and why, and link it towards the choice of government intervention within the data.)

- E.g. Relative extent of market failure is the most important factor because the aim of the government's intervention is to correct market failure. Since the government has chosen to block the merger, it likely deems that the possible deadweight loss that arises from market dominance is greater than that from factor immobility.
  - Feasibility is not likely to an important factor in this case because the UK Government has already decided to embark on the mobile network infrastructure investment programme (Extract 3).
  - It is likely that the UK Government deemed that the possible efficiencies arising from the merger are likely to bring about less benefits to society than the possible costs as a result of increased market dominance.
  - Etc.

Level	Knowledge, Understanding, Application and Analysis
L3 (7 – 8)	For a well-developed and well-contextualised answer. The importance of each factor is well-elaborated on, with appropriate examples of policy choices used to illustrate the argument. Factors discussed are important to the context provided.

L2 (4 – 6)	For a contextualised but underdeveloped discussion about the factors affecting the UK Government's decision making with a focus on achieving allocative efficiency. Factors chosen for discussion may not be of critical importance.
L1 (1 – 3)	Answers at this level may not answer the question (e.g. a full-fledged discussion about possible policies to undertake without a focus on factors affecting decision-making). They may also undertake a superficial, list-like approach of factors that the government should consider.
E2 (2)	For an answer that <u>uses analysis to support a judgement</u> about what the <u>key factors</u> that determine the UK government's interventions are. Judgement should be about 'factors', not just the method of government intervention. Judgement should not be about whether the UK Government's move to block the merger was justified or not.
E1 (1)	For an <u>unsupported</u> judgement about factors determining the UK Government's choice of intervention. Judgement should be about 'factors', not just the method of government intervention. Judgement should not be about whether the UK Government's move to block the merger was justified or not.

#### Examiners' overall comments:

- The gist of this question is that the government has many considerations when making a policy choice. When faced with different considerations, and with each consideration suggesting a different policy option, the government has to weigh its costs and benefits and consider the opportunity cost of its policy choice. This CSQ considered market failure arising from market dominance, and also consider issues of market failure arising from factor immobility and inequity. The best answers recognised the context provided well.
- There was a large variation in the quality of responses to this question. The most common pitfall was thinking that the government solely considered consumers' welfare when determining whether to block the merger – the social perspective of the government was largely absent. This showed a lack of understanding of the big picture view (e.g. micro and macro goals) that the government takes.
- Also, it was common to misinterpret the question as one asking about whether the move to block the merger was justifiable or not. This questions is about the factors that the government considered – consider instead which factors are likely to be the most important in influencing its decision.
- A common (valid) approach was to consider the different areas of performance from the point-of-view of society (e.g. productive efficiency, allocative efficiency, dynamic efficiency and equity). However, the quality of such explanations, and their application to the context given, differed.

#### Skills related issues:

- Clearly answer each question within the topic sentence of each paragraph to avoid going out of point. For example, candidates should clearly state what factor the government considers at the start of each point.
- The merger does not create a monopoly. Consider the context as given.

#### Content related issues:

- It was common to argue that the merger will lead to market dominance, leading to market failure due to allocative inefficiency. However, it is more accurate to say that the merger will worsen market failure. Even better answers drew diagrams to show

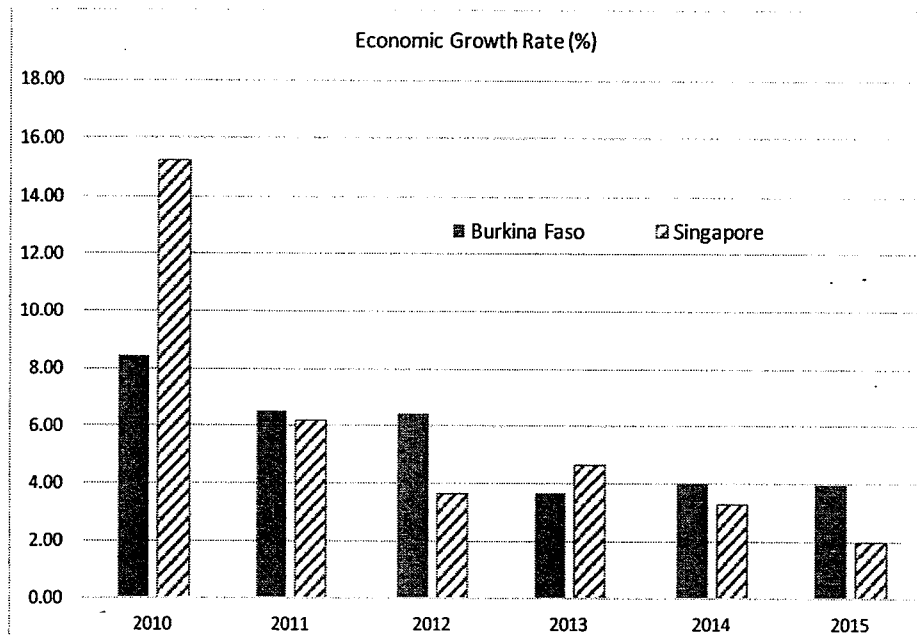
how deadweight loss increased when mergers occurred. However, such diagrams should ensure that their demand curves do not cross.

- Many points raised were not substantiated well. For example, if candidates wish to argue for the possibility of predatory pricing or price wars occurring after the merger, they should clearly explain why this is so (e.g. higher supernormal profits or cost advantages suggest the merged firm is better able to withstand the price war and thus capture market share etc.).
- Quite a number of students referenced LRAS when they actually meant LRAC.



## Question 2 Singapore and Africa

**Figure 1: Economic Growth Rate 2010 – 2015**



Source: World Bank

**Table 3: GDP per capita (current US\$) 2010 – 2015**

Country	2010	2011	2012	2013	2014
Burkina Faso	574.5	665.8	673.0	709.1	713.5
Singapore	46,569	53,093	54,451	55,617	56,007

Source: World Bank

### Extract 6: Africa still important for Singapore investments

Two African countries have signed investment treaties with Singapore to open up more bilateral business and investment opportunities. One of which is the Burkina Faso-Singapore bilateral investment treaty. The agreements aim to protect the interests of investors from the countries involved and to increase investment flows between Singapore and the two African countries. Singapore-based Olam International, for example, may stand to benefit from such an agreement as it seeks more investments in Africa. Olam will be specializing in crops used for Burkina Faso's exports such as sesame, shea nuts, cotton and ground nuts. Singapore's bilateral trade with Burkina Faso rose 15 per cent between 2012 and last year to \$2.54 million.

"The recently signed treaty between both countries has not come into force as it is pending ratification. In light of the recent political unrests in Burkina Faso, we expect a delay in the ratification process," a spokesperson of the Ministry of Trade and Industry told TODAY.

Chief operating officer of Singapore Business Federation (SBF) Mr Victor Tay agreed, saying: "Burkina Faso is just one of Africa's 53 countries, and most of them remain politically stable. Over 10 of our members are currently operating in the country, and none of them have left."

"Like investing in BRICs, the potential of Africa is a long term picture, and I don't expect the recent incident to cast a looming shadow over that outlook," he said.

Burkina Faso is one of the several countries in Africa, which is seeing very rapid economic growth on the back of its huge population and rich natural resources. The International Monetary Fund has projected last month a 5.75 per cent GDP growth for sub-Saharan Africa next year despite the shocks of Ebola outbreak.

This will mean opportunities for Singapore companies to export expertise in areas such as logistics, urban solutions and human resources to the rapidly developing economies there, Deputy Prime Minister Mr Tharman Shanmugaratnam noted during the Africa Singapore Business Forum in August.

Source: Todayonline, 10 November 2014

### **Extract 7: Tap Africa for business opportunities**

Singapore firms have been encouraged to seize business opportunities in fast-emerging Africa as global economic trends favour the continent. Deputy Prime Minister Tharman Shanmugaratnam suggested that Africa could present major openings as production costs rise in China's transformed economy.

"China has dominated manufacturing, particularly low-cost manufacturing, but China is becoming much more expensive and wages are rising quickly – they're trying to move up the value curve as well," he said yesterday. As a result, many companies are shifting manufacturing out of China – a trend that Africa, with its rapidly growing middle-class consumer market, should capitalise on, he said.

Singapore companies have a role to play in Africa's future too, especially in areas such as port and airport services and urban solutions such as in water and waste treatment, which Singapore has a lot of experience in, Mr Tharman said.

Standard Chartered Bank's CEO for Europe, the Middle East, Africa and the Americas, Mr V. Shankar, told The Straits Times on the sidelines of the forum that companies considering doing business in Africa tend to worry about the security issues there, the lack of infrastructure and the "sheer pain" of getting to the continent.

Singapore's trade with Africa has grown at a compound annual rate of close to 12 per cent over the past five years, reaching \$14 billion last year. Investments by Singapore firms have reached \$20 billion to date.

Source: The Straits Times, 28 August 2014

### **Extract 8: Singapore retains spot as second-most competitive economy**

Singapore retained its position as the world's second-most competitive economy this year despite concerns about business costs and tightening labour policies, according to the World Economic Forum (WEF) yesterday.

The WEF said Singapore fared well across all 12 factors assessed in the study, such as infrastructure, health and education, and technological readiness. The country scored especially well in terms of goods and labour market efficiency and financial market development, it added. "Singapore possesses world-class infrastructure, with excellent roads, ports and air transport facilities," the WEF said. "Its economy can also rely on a sound macroeconomic environment and fiscal management – its budget surplus amounted to 6.9 per cent of GDP in 2013."

The WEF said Singapore's competitiveness is enhanced by its strong focus on education, which has translated into a steady improvement in higher education and training. Singapore's private sector is also becoming increasingly sophisticated and more innovative, the WEF

added, "although room for improvement exists in both areas, which are the keys to Singapore's future prosperity".

These are also the two areas in which top-ranked Switzerland does particularly well. "Switzerland's top-notch scientific research institutions, along with other factors, make the country a top innovator," said the WEF.

"Productivity is further enhanced by a business sector that offers excellent on-the-job training opportunities, both citizens and private companies that are proactive at adapting the latest technologies, and labour markets that balance employee protection with business efficiency." The report comes as the global economy seems to be finally leaving behind the worst crisis of the past 80 years. But the WEF said the recovery is moving at a less decisive pace than it has after previous downturns.

Mizuho economist Vishnu Varathan said the Swiss approach shows that the Singapore Government's productivity push is necessary. Efforts to narrow the income gap and improve social mobility could also help Singapore score better in such international studies, he added. Singapore has been strengthening social safety nets for years, especially for healthcare and retirement adequacy for low income workers and retirees who do not qualify for the Pioneer Generation Package, and pensioners.

CIMB economist Song Seng Wun, however, said that Singapore should be more concerned about the possibility of slipping in the rankings.

"Giving businesses access to the resources that they need will still be the main challenge going forward," he said. "The risk of a policy misstep from a further tightening of labour policy could cause businesses to change their minds about Singapore. That, to me, is the higher possibility than for us to move up to No. 1."

Source: The Straits Times 04 Sep 2014

### Suggested Answers

<b>(a)</b>	<b>Using Figure 1, compare the growth performance of Burkina Faso and Singapore over the period 2010 to 2015.</b>	<b>[2]</b>
	<p>Command word: compare</p> <p>Similarity: [1]</p> <ul style="list-style-type: none"> <li>• Both Burkina Faso and Singapore experienced positive growth over the period 2010 to 2015.</li> <li>• Both Burkina Faso's and Singapore's positive growth rate experienced general decreasing trend over the period 2010 to 2015.</li> </ul> <p>Difference: [1]</p> <ul style="list-style-type: none"> <li>• Burkina Faso generally experienced a larger positive growth over the period 2010 to 2015 than Singapore.</li> <li>• Singapore's positive growth rate experienced a larger general decreasing trend over the period 2010 to 2015 compared to Burkina Faso.</li> </ul>	
<b>(b)</b>	<b>Explain how GDP and living standards are related.</b>	<b>[2]</b>
	<p>Command word: Explain how</p> <p>There is a positive relationship between Gross Domestic Product and living standards. [1]</p>	

	When GDP increases, living standards will improve, ceteris paribus, GDP per capita will increase, assuming population remains constant. Disposable income of households will increase and households will be more willing and able to consumer more goods and services which increases their material standard of living. [1]	
<b>(c)</b>	<b>Explain how the political unrest mentioned in Extract 6 might affect other African nations negatively.</b>	<b>[3]</b>
	<p>Command word: Comment</p> <p>Due to the political unrest in Burkina Faso (Extract 6), firms' and households' optimism of Burkina Faso's economic condition will worsen which result in households being less willing and able to consume goods and services while firms become less willing to investment in Burkina Faso. Due to the fall in consumption and investment, Burkina Faso's aggregate demand (AD) will decrease as <math>AD=C+I+G+(X-M)</math>. This will result in a negative economic growth and higher unemployment in Burkina Faso.</p> <p>Due to the political unrest in Burkina Faso, optimism of other African nations may also worsen due to fear of political unrest spreading to neighbouring African nations. Hence, these countries may also face similar fall in AD which would lead to recession (negative actual economic growth) and an increase in unemployment.</p>	
<b>(d)</b>	<b>Using Extract 7, explain the type of inflation China is facing which could have led to companies shifting out of China.</b>	<b>[2]</b>
	<p>Command word: explain</p> <p>Evidence: "wages are rising quickly"</p> <p>As most goods and services produced in China still require the use of labour, rising wages implies that cost of production would have risen. [1] This would lead to a fall in SRAS, and hence, ceteris paribus, cost-push inflation. [1]</p>	
<b>(e)</b>	<b>Using a diagram, explain how an influx of foreign direct investments may affect Burkina Faso's currency exchange rate.</b>	<b>[3]</b>
	<p>Price of Burkina Faso's currency in S\$</p> <p><u>Increase in Demand for Burkina Faso's currency</u></p> <p>Quantity of Burkina Faso's currency</p>	
	<p>Diagram [1]</p> <p>An influx of foreign direct investments will result in an increase in the demand for Burkina Faso's currency. [1]</p> <p>This will result in a shortage at the original value S\$0.2 and upward pressure on its price and hence, Burkina Faso's currency is likely to appreciate. [1]</p>	



(f)	<b>With reference to the data, comment on how the pattern of trade between Singapore and Africa may change over time.</b>	<b>[8]</b>
	<p>Command word: comment Key words: pattern of trade, change over time</p> <p><u>Introduction</u> Pattern of trade is measured by either volume or composition of goods traded between Singapore and Africa and is determined by demand and supply factors. A country is said to have comparative advantage in the production of a good when the country can produce the good at a lower opportunity cost than another country. Singapore and Africa are expected to trade based on their comparative advantages.</p> <p>Africa's factor endowment: huge population and rich natural resources Exports to Singapore: agriculture products</p> <p>Singapore's factor endowment: skilled labour Exports to Africa: expertise in areas such as logistics, urban solutions and human resources</p> <p><u>Body</u> (any one demand and one supply reason)</p> <p>Demand reasons</p> <ol style="list-style-type: none"> <li>1) Changes in income levels (or economic growth) <ul style="list-style-type: none"> <li>- Extract 6: "Burkina Faso is one of the several countries in Africa, which is seeing very rapid economic growth on the back of its huge population and rich natural resources". Rapid growth can result in imports of more goods from other countries such as Singapore. This increases the volume of Singapore's exports/Africa's imports.</li> </ul> </li> <li>2) Changes in taste and preference <ul style="list-style-type: none"> <li>- As income levels rise based on the above point, affluent consumers from Africa will import more luxury goods from Singapore. This increases the volume of Singapore's exports/Africa's imports.</li> </ul> </li> </ol> <p>Supply reasons</p> <ol style="list-style-type: none"> <li>1) Investments in Africa countries to boost their factor endowment – e.g. Olam's investment in Africa <ul style="list-style-type: none"> <li>- Firms that see Africa's potential will invest in them. They will then outsource certain production functions to them. In Olam's case, agriculture production of grains since it is cheaper to produce in Africa. This will then raise the production level and imports to Singapore from Africa. This will increase the level of imports from Africa to Singapore.</li> </ul> </li> <li>2) Shift in trade from other countries such as China <ul style="list-style-type: none"> <li>- Extract 7 "China has dominated manufacturing, particularly low-cost manufacturing, but China is becoming much more expensive and wages are rising quickly" – as China loses CA in low-end manufacturing, Africa will attract investments. Hence Africa has CA in production of goods in the manufacturing industry and Singapore will increase her imports from Africa and reduce its imports from China.</li> </ul> </li> </ol> <p>Other possible points to consider:</p> <ol style="list-style-type: none"> <li>1) Possible problems that trade may not increase. <ul style="list-style-type: none"> <li>- Reasons such as Ebola outbreak and political unrest could hamper trade between the two countries. It could also reduce the expected</li> </ul> </li> </ol>	

profits that firms enjoy and reduce the level of investments to African countries. As such, firms may not have set up as many offices in Africa as a cheap production outpost. Consequently, Singapore may not experience a significant increase in imports from Africa.

2) Trade with other countries continues.

- Despite the fact that China has become much more expensive, trade with China may remain strong due to contractual agreement or familiarity in dealing with suppliers and consumers. It also depends on how fast companies shift manufacturing out of China to Africa. If companies faced with problems shifting investment to Africa, then it is more likely that trade between Singapore and Africa will be hampered as output is likely to increase slower than expected.

3) Similar to the above points, limitations such as "security issues there, the lack of infrastructure and the "sheer pain" of getting to the continent" could also hamper the level of investments in Africa. This will result in slower change in the pattern of trade between Singapore and Africa as a result.

**Judgement**

Changes in trade pattern depends generally on the level of investments by firms in Africa. In turn, investments depend on the expected returns and it could be affected by recent security and other issues that affects Africa. If measures are in place to boost investments or to mitigate negative impacts, then the trade pattern between Singapore and Africa would increase in terms of volume and change in terms of composition.

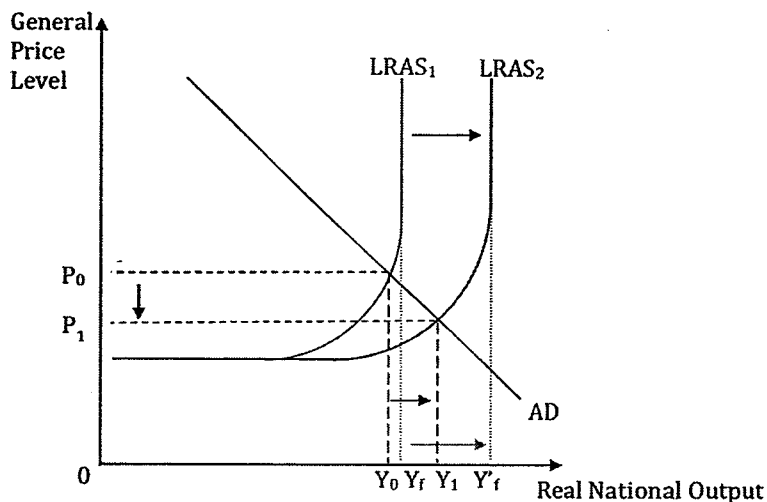
Level	Knowledge, Application, Understanding, Analysis
L3 (5 – 6)	Sufficient scope to explain the change in the pattern of trade between Singapore and Africa. Answers backed by economic analysis.
L2 (3 – 4)	Sufficient scope to explain the change in the pattern of trade between Singapore and Africa. Answers backed by limited economic analysis.
L1 (1 – 2)	Superficial analysis application of the change in trade pattern.
E2 (2)	Justified evaluation with reference to the reason for a change in trade pattern.
E1 (1)	Unjustified evaluation.

(g) In Extract 8, the WEF said that Singapore's competitiveness is enhanced by its strong focus on education. Assess whether Singapore should rely primarily on a steady improvement in higher education and training to achieve sustained economic growth. [10]

### Introduction

How a steady improvement in higher education and training can achieve sustained economic growth.

Higher education and training can lead to an increase in LRAS as the quality of labour improves. This increases the productive capacity as full employment output level rises in the LR. As LRAS rises, firms will increase investments and help to boost national output.



From the diagram above, as Singapore's LRAS rises, this will cause potential growth as national income rises from  $Y_0$  to  $Y_1$ . This comes with a corresponding increase in the full employment output from  $Y_f$  to  $Y'_f$ .

### Thesis:

1. Singapore is able to retain its position as the world's second-most competitive economy this year despite concerns about business costs and tightening of labour policies.

Singapore's strong labour policies help to boost its competitiveness. According to the WEF, Singapore fared well in all 12 factors in the study, such as in infrastructure, health and education. This suggests that Singapore can continue to maintain its economic growth and attract investors based on a highly competitive economy.

2. Singapore's macroeconomic environment and fiscal management is strong. It has strong budget surplus which amounted to 6.9% of GDP in 2013. This implies that Singapore has resources to continue to use supply-side policies to improve its competitiveness. This will then help to attract more investments and boost its exports.
3. From the extract, an economist mentioned that "The Swiss approach shows that the Singapore Government's productivity push is necessary". Hence the "productivity push" can continue to ensure that Singapore remains competitive and continues to achieve potential growth.

**Anti-Thesis:**

1. Singapore's private sector is also becoming increasingly sophisticated and more innovative. Private sector innovation may be important in achieving potential growth. As firms innovate, production methods improve and this will help to boost its productive capacity and increase exports. This will also help to achieve potential growth.
2. A more innovative private sector can also help to improve Singapore's comparative advantage in higher-end manufacturing sectors. This can help to boost Singapore's output of goods and services for exports, and thus, actual economic growth.
3. Singapore may need to move beyond relying primarily on a steady improvement in higher education and training. When comparing Singapore's competitiveness with Switzerland's, Switzerland's "top-notch scientific research institutions, along with other factors, make the country a top innovator". Singapore may need to boost not just training in workers, but to develop its own research institutions so as to constantly stay relevant to the global demand for high quality goods and services.
4. Singapore may need to encourage a business sector that "offers excellent on-the-job training opportunities" to help boost productive capacity as training of workers is more applicable to their jobs. Workers usually become even more efficient in this way than when training is provided by the government.

**Judgement**

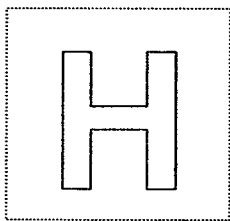
Whether Singapore should rely primarily on a steady improvement in higher education and training to achieve sustained economic growth depends on various conditions necessary for it to work. For instance it may depend on firms' expected gains from investments in Singapore or the government's important role in attracting more firms into Singapore, or other external shocks that may hamper the steady improvement in higher education and training.

<b>Level</b>	<b>Knowledge, Application, Understanding, Analysis</b>
L3 (6 – 8)	Well-explained discussion on whether Singapore should rely primarily on a steady improvement in higher education and training to achieve sustained economic growth. Excellent application of concepts of potential and actual growth to achieve sustained economic growth.
L2 (3 – 5)	Sufficient discussion on whether Singapore should rely primarily on a steady improvement in higher education and training to achieve sustained economic growth. Some use of economic concepts of potential and actual growth to achieve sustained economic growth.
L1 (1 – 2)	Smattering of reasons with no clear focus on the question and/or weak analysis of concepts/evidence from the extract.
E2 (2)	Justified evaluation with respect to the conditions necessary to achieve sustained growth.

	E1 (1)	Unjustified Evaluation.	
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[Total: 30]





PRELIMINARY EXAMINATION – 2016  
General Certificate of Education Advanced Level  
Higher 2

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**ECONOMICS**

**9732/02**

Paper 2

**14 September 2016**

**2 hours 15 minutes**

Additional Materials:      Answer Paper

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**READ THESE INSTRUCTIONS FIRST**

Write your name and class on all the work you hand in.

Write in dark-blue or black pen on both sides of the paper.

You may use an HB pencil for any diagrams, graphs or rough working.

Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **three** questions in total, of which **one** must be from Section A, one from Section B and **one** from **either** Section A or Section B.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

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This document consists of 3 printed and 1 blank pages.

**[Turn Over**

Answer **three** questions in total.

**Section A**

**One or two** of your three chosen questions must be from this section.

- 1 Electricity prices have been fluctuating. It has been observed, since early 2015, that there is a downward trend of electricity prices due to the fall in oil prices

Discuss the different demand and supply factors and their likely importance [25]  
in determining the observed changes in electricity prices in Singapore.

- 2 The Cheaptickets and Orbitz are online firms which give 'Members Only' deals on hotels users who are logged-in.

Adapted from [www.dailymail.co.uk](http://www.dailymail.co.uk)

(a) Explain the conditions for price discrimination and the possible [10]  
motivations for the above firms to do so.

(b) With price discrimination, society tends to suffer. To what extent do [15]  
you agree?

- 3 (a) Explain how the concepts of incremental benefits and costs are used [10]  
in decision-making by consumers and producers to maximise self-interest.

(b) Discuss the factors that determine the effectiveness of government [15]  
policies in bringing about an efficient allocation of resources in the market for goods and services.



**Section B**

**One or two** of your three chosen questions must be from this section.

**4 (a)** Explain how the concept of elasticities can determine the effectiveness of policies implemented by a government to achieve its macroeconomic goals. [10]

**(b)** Discuss whether the policies implemented by a government, in a bid to achieve its macroeconomic goals, would always lead to a conflict with its microeconomic goals. [15]

**5** “Falling prices dragged on growth prospects in the advanced world, especially in the Eurozone. Deflation is dangerous in European countries—most of which are highly indebted—as they increase the real values of fiscal debt burdens, while encouraging firms and consumers to delay their spending.”

Adapted from: The Telegraph, 2014

**(a)** Explain why a government in the Eurozone should be concerned about deflation. [10]

**(b)** Discuss the effects of the deflation in the Eurozone on the standard of living in Singapore. [15]

**6** Explain why an economy’s comparative advantage might change over time and discuss the benefits and costs brought about by globalisation to the Singapore economy. [25]

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## Suggested Mark Scheme for JC2 H2 Prelims 2016

### Question 1

Electricity prices have been fluctuating. It has been observed, since early 2015, that there is a downward trend of electricity prices due to fall in oil prices.

Discuss the different supply and demand factors and their likely importance in determining the observed changes in electricity prices in Singapore. [25]

### Suggested answers

**Approach:** Students should use demand/supply factors and PED/PES concepts to explain why electricity prices have been fluctuating and why there was a fall in electricity prices.

### Introduction

Brief explanation of market equilibrium and that changes to the price of electricity is due to changes in demand and supply factors.

### Body

**Side 1: Demand and supply factors are important in determining reported changes in the prices of electricity in Singapore.**

Students need to demonstrate that they can weigh the significance of the relevant demand and supply factors and the relative extent of shift in demand and supply

Possible factors affecting market for electricity

SS factor:

- Fall in cost of production of electricity- due to the fall in price of FOP (natural gas/oil) for electricity generation
- Increase or fall in cost of distribution – network cost (there is an increase in network/distribution cost over the years)

DD factor:

- Higher demand from household and firms- Increase household /industry needs etc
- Changes in population – Increase in population in Singapore

**Better answers should demonstrate that they can weigh the significance of each demand and supply factors (address the likely importance of each demand and supply factor)**

E.g. while network costs went up due to infrastructure investment to replace ageing assets and meet rising electricity demand, the lower cost of natural gas/oil more than offset this increase. Hence the fall in global price of oil and natural gas which is the main factor affecting cost of production, leads to an overall fall in cost of production, leading to an increase in supply.

**Students should be able to recognise that the supply response needs to outweigh the demand response for price to fall. (relative shifts in demand and supply curves)**

Considering magnitude of shift/changes: Increase in demand is less than the increase in supply, resulting in an overall fall in price.

**Students should then show the combined effects of an increase in supply (answers should relate to oil/natural gas prices) and increase in demand for electricity on the same diagram that explained an overall fall in electricity prices.**

**Students should also explain that fluctuation in prices are due to frequent changes in demand and supply factors.**

**Note: If analysis is sound, it is possible to credit explanation for a fall in demand but students must give credible reasons and links to demand factors.**

**Side 2: Other factors are also important in determining reported changes in the prices of electricity in Singapore, particularly the volatility of electricity prices.**

PED for electricity is likely to be price-elastic: As electricity is the most common form of energy for running home appliances and business operations, there is a high degree of necessity. There are no close substitutes hence its PED is likely to be less than 1

PES for electricity varies on a few factors: It largely depends on whether the power plants in Singapore are running with or without spare capacity. Mobility of FOP is also a relevant factor that the students can use.

Natural gas/oil are commodities which experience significant changes to its demand and supply (explain a few: speculation, weather conditions, quota agreed by major exporters etc.) **As natural gas/oil are factors of production of electricity, the volatility in these factor markets as well as the price inelasticity of supply and demand for electricity result in frequent fluctuation in to the prices of electricity.**

Students can illustrate with a diagram for clearer explanation

### **Possible conclusion and evaluation**

In conclusion, the electricity prices are strongly influenced by changes in its factor market, i.e. oil/natural gas. The fluctuation in prices observed are very often the direct outcomes of fluctuations in price of oil/gas. Therefore demand and supply factors (especially supply factors) are important factors influencing the price of electricity. The fluctuation in prices can be explained by both demand and supply factors as well as PED/PES of electricity.

### **Other external factors that affect price changes:**

Energy market authority regulates prices of electricity in Singapore. Evaluation can be made on how regulation can reduce large fluctuations in prices as the government will avoid sharp changes (reduce volatility) to electricity prices which may affect consumer expenditure significantly or increased uncertainty to firms' cost of production

Electricity prices may also be charged on seasonal cost as changes in cost of production generally reflect variations in electricity demand, availability of different generation sources, fuel costs, and power plant availability. Prices are usually highest in hot weather/ hazy condition when total demand is high and when more expensive generation is needed to meet the increased demand.

<b>Level</b>	<b>Knowledge, Understanding, Application and Analysis</b>	<b>Marks</b>
L3	For a balanced and well-explained answer that uses application and analysis to discuss the importance of demand and supply factors in influencing the fluctuation AND the fall in electricity prices. Good analysis on relative importance of demand and supply factors/PED and PES and the relative magnitude of shifts are considered in the given context.	15-21
L2	For a good attempt to discuss the importance of demand and supply factors but limited in analysis. For good but one-sided answers which did not consider the importance of other factors such as elasticity values or why prices fluctuate much in the given context (max of 10).	10-14
L1	For some knowledge but limited applications of demand and supply factors on how it influence price changes. Answer may be irrelevant.	1-9
<b>Level</b>	<b>Allow up to 4 additional marks for Evaluation</b>	<b>Marks</b>
E2	Judgement that is well-substantiated based on economic analysis.	3-4
E1	For an unsubstantiated judgement, or one that is not based on economic analysis.	1-2



## 2016 Prelim – H2 Economics EQ2

- 2 Cheapticket and Orbitz are online firms which give 'Members Only' deals on hotels to users who are logged-in.

Adapted from www.dailymail.co.uk

- (a) Explain the conditions for price discrimination and the possible motivations for the above firms to do so. [10]
- (b) With price discrimination, society tends to suffer. To what extent do you agree? [15]

**(a)**

### INTRODUCTION

Define price discrimination – a firm selling of the same good at different prices not due to differences in cost of production.

### BODY

Three conditions must be present:

- (i) Firm must possess market power (to set prices);
- (ii) Firm must be able to separate consumers into different sub-groups and ensure no seepage across sub-groups;
- (iii) The price elasticities of demand of the good are different across the different sub-markets.

Students to use an example to illustrate the necessary conditions above for a firm to practise PD.

Possible motivations:

- To increase revenue and, hence, increase profits (due to same cost incurred)
- Higher market share due to higher quantity demanded (3<sup>rd</sup> degree PD)

### CONCLUSION

The above conditions are necessary for successful PD to be practised in order to achieve the desired goals of a firm.

Level	Knowledge, Application, Understanding and Analysis
L3 (7 – 10)	<ul style="list-style-type: none"> <li>- 3 well-explained conditions.</li> <li>- Use of real-life example is needed to obtain full credit.</li> <li>- At least one objective of firm is required.</li> </ul>
L2 (5 – 6)	<ul style="list-style-type: none"> <li>- 2 well-explained conditions <u>OR</u> 3 conditions but only briefly explained.</li> <li>- At least one objective of a firm.</li> </ul>
L1 (1 – 4)	<ul style="list-style-type: none"> <li>- 1 well-explained condition OR 2 conditions but only briefly explained.</li> <li>- At least one objective of a firm.</li> </ul>

**(b)**

**With price discrimination, society tends to suffer.**

**To what extent do you agree?**

**[15]**

### INTRODUCTION

- State the economic agents of the society – consumers, firms, government
- Goals of economic agents:
  - o Consumers: utility maximisation (consumer surplus)
  - o Firms: Profit-maximisation
  - o Government: maximise societal welfare

### BODY

#### **Thesis (consumers, other firms and the government suffer)**

- Consumers who face higher prices (2<sup>nd</sup> degree and 3<sup>rd</sup> degree) enjoy lower CS than before. Lower utility.
- Increased profitability may encourage/allow firms to grow larger – increasing market dominance. Smaller/weaker firms may not survive should the dominant firm gain greater market power. Start to earn lower/negative profits → shut down leading to possible retrenchment.
- More market power → more market dominance → more severe case of market failure

#### **Anti-thesis (consumers, other firms and the government gain)**

- Increased profitability may encourage/allow firms to embark on R&D → DE → more choices for the consumers.
- Govt could gain more corporate income tax → more funds to finance social programmes (equity)
- Other benefits
  - o 3<sup>rd</sup> degree PD:
    - Richer/more able consumers pay higher price
    - Lower ability consumers pay lower price
    - → helps bridge income gap (cross subsidisation)
  - o 1<sup>st</sup> degree PD
    - Allow loss-making firms to continue to survive. Hence, consumers continue to enjoy the goods and services.
    - Achieves AE



Level	Knowledge, Application, Understanding and Analysis
L3 (9 – 11)	For a comprehensive and detailed answer that provides a balanced explanation of the benefits and costs of PD to society's stakeholders.
L2 (6 – 8)	For an answer that briefly attempted to explain both the benefits and costs of PD.
L1 (1 – 5)	For an answer that is mostly descriptive and with some inaccuracies or one-sided answer focusing on either the benefits or costs of PD.
E2 (3 – 4)	For a judgement based on economic analysis/adequately substantiated.
E1 (1 – 2)	For an unexplained judgement, or one that is not supported by economic analysis.



2016 JC2 H2 Prelim EQ3

- 3 (a) Explain how the concepts of incremental benefits and costs are used in decision-making by consumers and producers to maximise self-interest. [10]
- (b) Discuss the factors that determine the effectiveness of government policies in bringing about an efficient allocation of resources in the market for goods and services. [15]

**Suggested Answer (a)**

**INTRODUCTION**

- Scarcity arises because people desire more goods and services than available resources can provide. Given that resources are scarce, consumers and producers have to decide how to make use of their scarce resources to maximise their own self-interest.
- Assume maximising self-interest  $\Rightarrow$  consumers seek to maximise utility and producers maximise profits.
- The decision-making process involves the use of the concepts of incremental benefit and incremental cost.

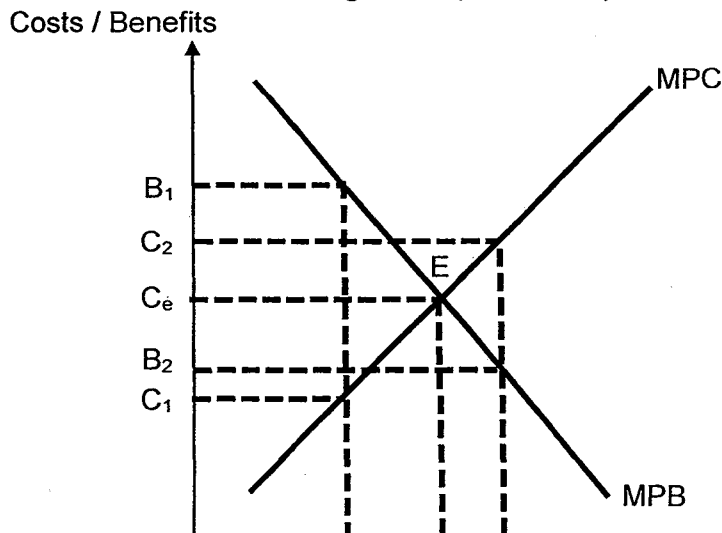
**BODY**

- In the pursuit of self-interest, consumers and producers consider only their private costs and benefits.

**Consumers**

- Constrained by their budget  $\Rightarrow$  rational consumers would consume up to the quantity where the marginal private benefit (MPB) is equal to the marginal private cost (MPC). MPB (incremental benefit)  $\Rightarrow$  benefit enjoyed by a consumer from the consumption of an *additional* unit of the good or service. Example: the satisfaction of consuming an additional can of Coke.  
MPC (incremental cost)  $\Rightarrow$  cost incurred by a consumer in the consumption of an *additional* unit of a good or service. Example: the price he has to pay for the additional can of Coke.

- With the aid of a diagram, *explain* the equilibrium condition,  $MPB=MPC$ .



- At  $0Q_1$ ,  $MPB > MPC$ . The last unit of Coke consumed yields an incremental benefit of  $0B_1$  but an incremental cost of only  $0C_1$ , giving a net benefit of  $B_1C_1$  to the consumer. **A rational consumer, attempting to maximize his self-interest**, would therefore consume the additional can of Coke. He would continue to consume more cans of Coke as long as the incremental benefit (MPB) exceeds the incremental costs (MPC). Eventually, at  $Q_e$ ,  $MPB = MPC = 0C_e$  i.e. the incremental benefit derived from the last can of Coke consumed exactly equals the incremental cost incurred by the consumer and no more net benefit can be gained. At this quantity, his optimum level of consumption has been reached, his self-interest is maximised.

If he consumes beyond  $0Q_e$ ,  $MPC > MPB$  e.g. at  $0Q_2$ , as the incremental cost,  $0C_2$  exceeds the incremental benefit,  $0B_2 \Rightarrow$  net benefits fall  $\Rightarrow$  not maximising his self-interest.

## Producers

Explain how producers maximises self-interest (profits) using the incremental benefit and incremental cost concepts.

- Producers produce goods and services because they earn revenue from selling them. *Marginal revenue* is the incremental revenue earned from the sale of an additional unit of output.
- Production incurs costs for the producer. Marginal cost is the incremental cost incurred in producing an additional unit of output.
- To maximise self-interest, i.e. profits, a producer would produce the output where  $MR = MC$ .
- With the aid of a diagram, *explain* the equilibrium condition.  
Price, revenue, cost

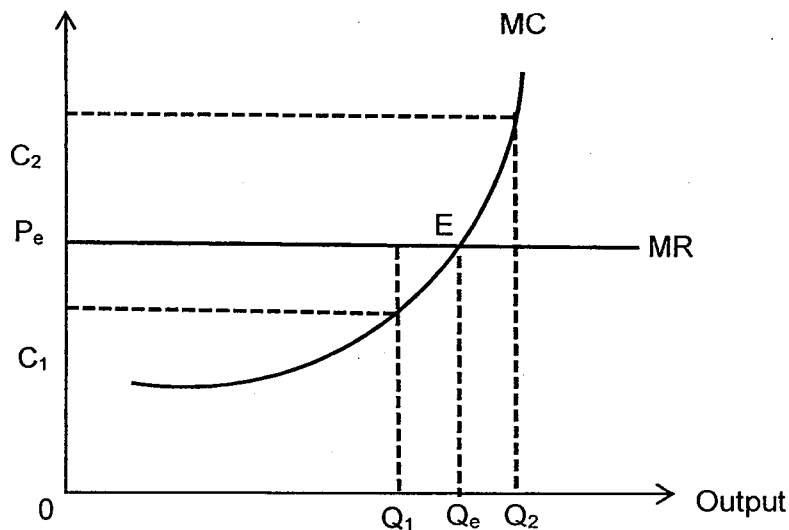


Figure 2: Profit maximisation by a producer

Assume a producer in a perfectly competitive market. At output  $Q_1$ ,  $MR > MC$ , an additional unit of output adds more to TR ( $AQ_1$ ) than to TC ( $BQ_1$ ) i.e. the incremental benefit (MR),  $0P_e$ , exceeds the incremental cost (MC),  $0C_1$ . Hence, a profit-maximising producer would choose to produce the additional unit of output as his total profits would increase (by  $C_1P_e$ ).

At output  $Q_2$ ,  $MR < MC$ , production of an additional unit adds less to TR ( $OP_e$ ) than to TC ( $OC_2$ ). As such, a rational producer would choose not to produce the additional unit as his total profits would fall (by  $P_eC_2$ ).

At  $0Q_e$ ,  $MR=MC$ , the producer has reached his optimal level of output: his profits is maximised.

- Hence, the concepts of incremental benefits and incremental costs guide both the consumers and producers in their decision-making to maximise their self-interest when faced with the problem of scarcity.

Level	Knowledge, Understanding, Application, Analysis
L3 (7 – 10)	For an answer that showed thorough and clear explanation based on sound economic framework of how consumers and producers maximise self-interest.  Decision-making by consumers and producers which involves the use of incremental benefit and incremental cost is well analysed. Simple application to real world is required.
L2 (4 – 6)	For an answer that has gaps in explanation of decision-making. For example, students did not consistently use the concept of incremental benefit and incremental cost in analysing the decision making process. Objectives of consumers and producers were left out. 'Self-interest' is not explained.  One-sided answer (i.e. only consumers or only producers)
L1 (1 – 3)	For an answer that contains answer contains conceptual errors and some irrelevant points or generic explanation without incorporating the concepts of incremental benefit and incremental cost which is a requirement of the question.

### Suggested Answer (b)

- (b) Discuss the factors that determine the effectiveness of government policies in bringing about an efficient allocation of resources in the market for goods and services.

[15]

### Comments:

This is a challenging question which requires students to zoom out and look at government intervention to correct market failures across different markets for goods and services to distil the factors that influence the effectiveness of government intervention. An assessment of the extent to which the factors influences the effectiveness of government policies in bringing about an efficient allocation of resources is expected.

A possible approach:

- Identify and explain factors
- Explain how these factors affect the effectiveness of government intervention using examples. (side 1)
- Assess the extent to which these factors influence the effectiveness of government policies in bringing about an efficient allocation of resources. (side 2)

## INTRODUCTION

- Brief explanation of why the government need to intervene in the market for goods and services – to achieve efficient allocation of resources. Suggest some possible sources of market failure.
- State the factors which would be discussed in answer.
- Stand: comment on relative importance of these factors.

## BODY

- **Degree of information imperfection**

Side 1:

Explain with examples. Government inaccurate computation of the true value of MEB and MEC in the case of existence of externalities. Question does not require a full explanation of why the market fails when externalities exist. The imperfect information might result in government over/under-taxing in the case of negative externality i.e. externalities are not fully internalised. A good example  $\Rightarrow$  control of road usage / traffic congestion. Over-taxing might result in under-usage of roads resulting in welfare loss due to under-consumption.

Side 2:

The greater the degree of information imperfection  $\Rightarrow$  the less effective the government policies to achieve allocative efficiency.

- **Time lag**

Side 1:

Government's decision to intervene and extent of intervention is based on incremental benefit and cost calculated using past data. But real world market conditions are dynamic. Thus the true incremental benefit and cost (assuming no imperfect information) might change over time. E.g. with rising affluence, road usage increases as more people desire to drive their own cars  $\Rightarrow$  planned policies become less effective in solving the problem of traffic congestion  $\Rightarrow$  likely to under-correct the market failure.

Side 2:

The longer the time lag, the more inaccurate are the predicted incremental benefits and costs and the lower the effectiveness of government policies to achieve allocative efficiency.

- **Government resources**

Side 1:

Is the government able to marshal sufficient resources to enable it to intervene on the scale required to achieve allocative efficiency. E.g. education is grossly under-consumed in poor countries  $\Rightarrow$  requires massive amount of resources to provide education on a sufficiently large scale to ensure allocative efficiency. The insufficiency of government resources (low government reserves / revenue) renders government policies less effective  $\Rightarrow$  unable to provide the required intensity of intervention.

Side 2:

Lack of government resources likely to apply to developing countries and developed countries with huge public debts. Limited government resources coupled with the need to intervene in multiple markets ⇒ these resources are thinly spread across the markets ⇒ unable to eliminate allocative inefficiency in all of these markets.

- **Responsiveness of market to government policies to achieve allocative efficiency.**

Side 1:

Government policies to achieve allocative efficiency ⇒ requires the market to respond as required by the policies to maximise effectiveness. E.g. public education to correct imperfect information e.g. vaccination against infectious disease – requires the public to respond positively to align perceived MPB to true MPB so as to raise consumption to the socially optimal level.

e.g. 2 fines for disposal of chemical waste into water sources. Close monitoring required.

Side 2:

The responsiveness of market to government policies may depend on:

- Target group – e.g. the elderly are less likely to understand the importance of vaccinations ⇒ gap between perceived MPB and true MPB remains ⇒ policy less effective.
  - Channels of communication differs with age group ⇒ elderly might require home visit to spread the message while the younger consumers more receptive to message posted on social media.
  - For the case of fines ⇒ necessary to back up with legal enforcement and close monitoring to ensure success of policy.
- **Case of more than one source of market failure in the same market**

Side 1:

A challenge to achieve allocative efficiency with just one policy. Government might have to implement more than one policy to ensure achievement of objective. E.g. imperfect information and positive externality – merit good.

Side 2:

Problem can be solved with implementation of multiple policies. Alternatively to prioritise the source of market failure to tackle.

## JUDGEMENT / CONCLUSION

- Judgement on which factor is the key determinant of effectiveness of government policies eg

A key determinant of effectiveness of government policies in bringing about efficient allocation of resources is imperfect information. Reasons:

- Extreme information imperfection ⇒ **government failure** i.e. intervention leads to greater allocative inefficiency (larger deadweight) than the free market.

- It affects effectiveness of government intervention in nearly **all** markets for goods & services.

Whereas other factors such as time lag rendering policies ineffective applies to markets which are more dynamic e.g. road usage, addiction to gambling (increase access to online gambling) and less to markets which are relatively more stable e.g. healthcare – less likely to experience rapidly rising / falling demand.

<b>Knowledge, Application, Understanding and Analysis</b>		
<b>L3</b>	For a comprehensive and detailed answer that provides a balanced discussion on the factors which affect the effectiveness of government policies to achieve allocative efficiency and an equally proficient assessment of the extent of this impact.  Appropriate examples incorporated in discussion for depth.  Sufficient scope – at least 2 well discussed factors.	<b>9-11</b>
<b>L2</b>	For an answer that provides a balanced but undeveloped discussion on the factors which affect the effectiveness of government policies to achieve allocative efficiency and an attempt to assess of the extent of this impact.  No attempt to assess the factors – cap at 6 if factors are well elaborated.  At least 2 factors discussed.	<b>6-8</b>
<b>L1</b>	For an answer that is mostly descriptive (unexplained statements), with some inaccuracies or showed some knowledge of reasons why government policies to achieve allocative efficiency in markets for goods and services may not be totally effective. Lacks scope (1 appropriate factor and depth).	<b>1-5</b>
<b>Evaluation</b>		
<b>E2</b>	For a judgment based on economic analysis/ adequately substantiated	<b>3-4</b>
<b>E1</b>	For an unexplained judgment, or one that is not supported by economic analysis	<b>1-2</b>



100

101

102

103



4.	a)	Explain how the concept of elasticities can determine the effectiveness of policies implemented by a government to achieve its macroeconomic goals.	[10]
	b)	Discuss whether policies implemented by a government, in a bid to achieve its macroeconomic goals, would always lead to a conflict with its microeconomic goals.	[15]

## Part A

### Introduction

- Define elastic concepts used in essay (e.g. XED and PED).
- List macroeconomic goals.

### Body

#### 1. Marshall-Lerner condition and how depreciation can correct current account deficit

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how a depreciation can be used to increase export revenue and decrease import expenditure to reduce a current account deficit to bring about healthy BOP.
- [How elasticity concept affects the effectiveness]:
  - However, this will only be effective if  $PED_x + PED_m > 1$  (Marshall-Lerner Condition). If condition is not met, a depreciation will reduce export revenue and increase import expenditure instead. This will increase the size of a current account deficit.

#### 2. Interest elasticity and monetary policy to increase actual economic growth

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how expansionary monetary policy (increasing money supply to reduce interest rates) can be used to increase C+I and AD, ceteris paribus. This can then lead to an increase in actual economic growth, assuming that economy has spare capacity.
- [How elasticity concept affects the effectiveness]:
  - Even if the central bank has successfully reduced the  $r$  in the economy, the interest elasticity of demand for I may also limit the effectiveness of such an exp. mp.
  - In Fig 6.2d, when faced with a relatively interest inelastic  $MEI_1$  (Marginal Efficiency of Investment), a reduction in  $r$  from  $r_1$  to  $r_2$  would only increase I from  $I_0$  to  $I_1$ , leading to a limited rise in AD and, hence, RNY.
  - **Demand for investment is interest inelastic if business outlook is poor.**
  - Firms would not increase borrowing by much even when interest rate falls because they want to avoid taking risks. Hence, the effectiveness of exp. mp is reduced.
  - However, the same reduction in  $r$  will increase I from  $I_0$  to  $I_2$  when the demand for I is much more interest elastic ( $MEI_2$ ). This will mean a more significant rise in AD and hence RNY.

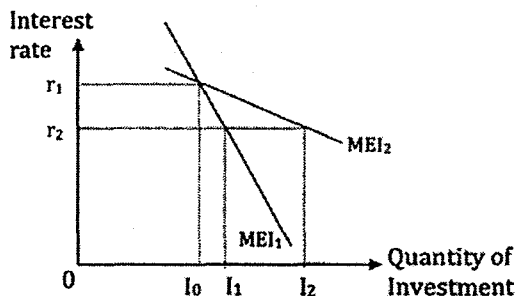


Fig 6.2d: Interest elasticity of demand for investment

#### 3. PED of imports and how tariffs can correct current a/c deficit

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how tariffs can be used to reduce import expenditure and current account deficit.
- [How elasticity concept affects the effectiveness]:
  - If demands for imports are price inelastic, an increase in price of imports brought about by tariffs would lead to a less than proportionate fall in  $Q_d$  of imports. Therefore, import

expenditure might increase. This would then limit the ability of tariffs to reduce current account deficit.

**4. XED of domestic goods with respect to price of imported goods and how tariffs can increase consumption and actual economic growth**

- [Mechanism of policy & linking to macroeconomic goal]:
  - As an expenditure-switching tool, tariffs can be used to reduce import expenditure by increasing price of imports. This can help by switching from spending of domestic residents on imports to domestic consumption. This can then help to increase AD, ceteris paribus, and actual economic growth if there is sufficient spare capacity in the economy.
- [How elasticity concept affects the effectiveness]:
  - The XED of domestic products with respect to price of foreign imports may be very low if they are poor substitutes.
  - Therefore, the extent to which a rise in price of imports can lead to a rise of domestic consumption, and therefore actual economic growth, is limited.

Level		Descriptors
L3	7-10	<ul style="list-style-type: none"> <li>• Provides at least <b>three</b> possible ways in which elasticity concepts can affect effectiveness of macroeconomic policies – not all three points have to be free of errors to attain L3, however, that would be expected of a 10m answer.</li> <li>• Clear analysis of how the workings of policies in bringing about macroeconomic goals.</li> <li>• Clear explanation of how elasticity concepts can affect the effectiveness of these policies.</li> <li>• Effective use of economic framework (e.g. AD/AS framework).</li> <li>• Makes relevant and essential assumptions (e.g. holding other factors of AD constant, level of spare capacity etc.)</li> </ul>
L2	5-6	<ul style="list-style-type: none"> <li>• Provides at least <b>two</b> possible ways in which elasticity concepts can affect effectiveness of macroeconomic policies</li> <li>• Superficial/incomplete explanation of the workings of policies in bringing about macroeconomic goals.</li> <li>• Superficial/incomplete explanation of how elasticity concepts can affect the effectiveness of these policies.</li> <li>• Limited or erroneous use of economic framework (e.g. AD/AS framework).</li> <li>• Limited use of assumptions (e.g. holding other factors of AD constant, level of spare capacity etc.)</li> </ul>
L1	1-4	<ul style="list-style-type: none"> <li>• Conceptual errors</li> <li>• Insufficient elaboration and link to economic frameworks</li> </ul>

<b>b)</b>	<b>Discuss whether policies implemented by a government, in a bid to achieve its macroeconomic goals, would always lead to a conflict with its microeconomic goals.</b>	<b>[15]</b>
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*Note: Students have to first explain how policies can achieve specific macroeconomic goals, before explaining how, in the process, there is a trade-off with microeconomic goals.*

**Introduction**

- List microeconomic goals (macroeconomic goals already established in Part A)
- Stand

**Thesis: Policies to achieve macroeconomic goals may conflict with microeconomic goals**

**1. Expansionary fiscal policy (reduction of tax) to increase actual economic growth and reduce cyclical unemployment may cause inequity to worsen**

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how expansionary policy (reduction of tax) can help to bring about actual economic growth and reduce cyclical unemployment (link to C+I+G, AD and multiplier)
- [Explain trade-off with microeconomic goal]
  - A reduction in direct taxes may exacerbate income inequality because these direct taxes tend to be progressive (i.e. there is a larger tax burden on the rich). Often, the poorest households and unemployed are not taxed. When taxes are cut, it increases disposable income of the rich without raising that of the poorest income groups. This exacerbates the income gap and hence this can cause inequity to worsen

**2. Demand management policies to increase AD may lead to increase in I and over-pdn of goods that can lead to negative externalities (fall in AE)**

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how expansionary monetary policy (reduction of interest rates) can help to bring about actual economic growth and reduce cyclical unemployment (link to C+I+G, AD and multiplier)
- [Explain trade-off with microeconomic goal]
  - A fall in interest rates which can promote greater investments can lead to an over-production of goods that give rise to negative externalities (e.g. garment production in China leading to water pollution due to emission of dyes) – *students need to make links to MSC/MSB framework, identify third parties and how that are adversely affected by the over-production*

**3. Protectionist measures to reduce current a/c deficit may lead to productive inefficiencies, allocative inefficiency and/or inequity**

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how quotas or other forms of protectionism can help to reduce import expenditure and therefore reduce current account deficit
- [Explain trade-off with microeconomic goal]:
  - Explain how protectionism reduces level of competition as market share of foreign firms is reduced
  - This fall in level of competition and increasing market dominance can lead to:
    - X-inefficiency and productive inefficiency
    - Increase in allocative inefficiency - *Students should use market structure theory to explain how protectionism acts like barriers to entry and hence increases market share and power of domestic firms. These increase the DD for domestic firms and make their goods less price elastic. Therefore, they are able to set a higher price and the profit-maximising price would be much greater than marginal cost. This worsens allocative inefficiency. The use of diagram to show deadweight loss in this instance will be helpful.*
  - Worsening of inequity between firms and consumer – *Students should explain why existing firms can make more profits due to the increase in market share (as explained above). The increase in supernormal profits at the expense of consumers worsen inequity between producer and consumer*

**Antithesis: Policies to achieve macro goals may not conflict with microeconomic goals**

**1. Supply-side policies to increase labour productivity may improve income equality**

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how interventionist supply-side policies, like subsidies provided for training and retraining, can help to increase labour productivity and therefore potential economic growth
- [Explain complementary microeconomic goal]:
  - Raising productivity levels of low-skilled workers help these workers' earn higher wages too and bridge their income gap with higher-skilled workers
  - High productivity levels means higher output per hour which justifies the firm paying these workers more
  - This can lead to an improvement in income equality and hence promote equity

**2. Market-oriented Supply-side Policies can reduce allocative inefficiency, productive inefficiency and increase equity between producers and consumers**

- [Mechanism of policy & linking to macroeconomic goal]:
  - Explain how Market-oriented supply-side policies, like de-regulation, can reduce cost of production and hence increase SRAS. Increase in SRAS can lead to increase in real NY, alleviation of cyclical unemployment and cost-push inflation.
- [Explain complementary microeconomic goal]:
  - Explain how Market-oriented supply-side policies, like de-regulation, which increase level of market competition can reduce market dominance and allocative inefficiency
  - Students can also explain how increase in level of market competition can reduce X-inefficiency, and supernormal profits of dominance firms, hence improving equity

**3. Expansionary Fiscal Policy may also lead to increase in AE**

- [Mechanism of policy & linking to macroeconomic goal]:
  - Increase in government expenditure through expansionary fiscal policy can lead to an increase in AD, ceteris paribus, and multiplied increase in real NY. This can lead to actual

- [Explain complementary microeconomic goal]:
  - Increase in government expenditure on provision and subsidies of merit goods, such as education and healthcare, can increase consumption of these goods
  - Explain how this can reduce positive externalities and allocative inefficiency

### Synthesis

Macroeconomic policies can have positive and negative side effects on microeconomic goals. However, government can also implement additional policies to enhance these positive side effects and reduce the negative side effects (give examples).

Level		Descriptors
L3	9-11	<ul style="list-style-type: none"> <li>• Complete and well-developed explanation of how policies work to achieve macroeconomic goals before linking them to conflicts with microeconomic goals</li> <li>• Well-developed and unambiguous explanation of how microeconomic problems arise due to macroeconomic policies</li> <li>• Well-developed explanation of how macroeconomic policies may not lead to conflict of goals</li> <li>• Sufficient balance of arguments – explained whether conflict with microeconomic goals would and would not arise</li> </ul>
L2	6-8	<ul style="list-style-type: none"> <li>• Incomplete explanation of how policies work to achieve macroeconomic goals</li> <li>• Poor links between macroeconomic policies and microeconomic problems</li> <li>• Incomplete explanation of how microeconomic goals may/may not be compromised by macroeconomic policies</li> <li>• Attempt to provide balance of arguments</li> <li>• Answers that only seek to explain how microeconomic goals are compromised without attempted to explaining macroeconomic goals achieved from the policies will be capped at 6m as 'conflict of goals' is a key requirement of question               <ul style="list-style-type: none"> <li>○ <i>e.g. only explaining how macroeconomic policies, like contractionary fiscal policy, may lead to worsening of inequity, without first explaining which macroeconomic goals are achieved</i></li> </ul> </li> </ul>
L1	1-5	<ul style="list-style-type: none"> <li>• Serious conceptual errors</li> <li>• Answer is largely out of point (e.g. answer is about limitations of macroeconomic policies without links to microeconomic goals)</li> <li>• For a descriptive answer that is poor in or lack economic analysis</li> </ul>
E1	1-2	<ul style="list-style-type: none"> <li>• Relevant stand taken but with inappropriate or inadequate justification.</li> <li>•</li> </ul>
E2	3-4	<ul style="list-style-type: none"> <li>• Relevant stand taken with appropriate and adequate justification.</li> </ul>

5	<p>“Falling prices dragged on growth prospects in the advanced world, especially in the Eurozone. Deflation is dangerous in European countries—most of which are highly indebted—as they increase the real values of fiscal debt burdens, while encouraging firms and consumers to delay their spending.”</p> <p>Adapted from: The Telegraph, 2014</p>		
	a)	Explain why a government in the Eurozone should be concerned about deflation.	[10]
	b)	Discuss the effects of the deflation in the Eurozone on the standard of living in Singapore.	[15]

**Part A**

**Introduction**

- Define deflation – inordinate fall in general price level
- List macroeconomic goals
- Governments should be concerned about deflation because it can negatively affect its macroeconomic goals

**Body**

**1. Deflation may lead to fall in consumption due to delayed consumption which can exacerbate recession and fall cyclical unemployment**

- In a deflation, it is likely that the economy is also experiencing unemployment (i.e. AD cuts AS at the Keynesian range of the AS curve)
- During periods of deflation, consumers delay their current spending because they expect prices to fall in future.
- This fall in current consumption can lead to a fall in AD, ceteris paribus, which can lead to a multiplied fall in real NY and hence a recession.
- A recession can lead firms reducing output and reducing derived demand for labour hence increase in cyclical unemployment

**2. Deflation may worsen business sentiments and reduce I which can lead to fall in I therefore fall in actual and potential economic growth**

- In periods of deflation, business sentiments may worsen as falling price levels may be due to fall on consumers' demand for goods and services
- As prices fall, revenues of producers fall and this may be a signal to them to reduce output and investment
- A fall in investment can lead to a fall in AD, ceteris paribus, and hence multiplied fall in real NY and possibly a recession.
- A fall in investment may also affect replacement of capital and growth of productive capacity. Therefore, LRAS falls leading to a fall in potential economic growth

**3. Deflation may cause capital outflow which may increase a BOP deficit/reduce BOP surplus**

- Deflation leading to poor business sentiments, due to reasons explained above, may lead to capital outflow as firms move their operations to focus on foreign markets
- The uncertainty and pessimism caused by the fall in real NY and GPL may also lead to short-term capital outflows
- These can cause a deficit in the capital account which can increase a BOP deficit/reduce BOP surplus

**4. Deflation may increase real value of fiscal debt hence need to implement austerity which leads to great recession and cyclical unemployment**

- A persistent fall in GPL increases the real value of fiscal debt incurred from the past
- The increase in real value of debt may necessitate austerity measures by the government to restore its credit worthiness and business confidence
- Austerity measures – involving a fall in government spending and rise in taxes – may lead to a fall in C, I and G, and therefore AD, ceteris paribus. This would then lead to a multiplied fall in real NY and hence cyclical unemployment when firms cut output and reduce derived demand for labour

Level		Descriptors
L3	7-10	<ul style="list-style-type: none"> <li>Provides at least <b>three</b> possible ways in which deflation may adversely affect economic goals of the government – all three points do not have to be free of errors to attain L3, however, that would be expected of a 10m answer.</li> <li>Effective use of economic framework (e.g. AD/AS framework).</li> <li>Makes relevant and essential assumptions (e.g. holding other factors of AD constant, level of spare capacity etc.)</li> </ul>
L2	5-6	<ul style="list-style-type: none"> <li>Provides at least <b>two</b> possible ways in which deflation may adversely affect economic goals of the government Superficial/incomplete explanation of the workings of policies in bringing about macroeconomic goals.</li> <li>Superficial/incomplete explanations of how deflation affects economic goals of the government</li> <li>Limited or erroneous use of economic framework (e.g. AD/AS framework).</li> <li>Limited use of assumptions (e.g. holding other factors of AD constant, level of spare capacity etc.)</li> </ul>
L1	1-4	<ul style="list-style-type: none"> <li>Conceptual errors</li> <li>Insufficient elaboration and link to economic frameworks</li> </ul>

b)	Discuss the effects of the deflation in the Eurozone on the standard of living in Singapore.	[15]
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### Introduction

- Define SOL and unpack material and non-material SOL
- Establish characteristics of Singapore's economy – small and open
- Deflation from Eurozone can affect Singapore through trade and capital flows
- Stand

### Body

#### Effects of deflation in Eurozone on material SOL in Singapore

- Thesis: Negative impact on material SOL
  - Fall in net export revenues as deflation-induced recession in Europe might reduce DD for SG's exports → fall in AEG → fall in material SOL in SR
    - Evaluation: Singapore may still be able to maintain export performance by exporting to other economies like US and China → increase AEG and material SOL*
  - Fall in FDI inflows to SG due to worsening MEI in Europe → fall in AEG and PEG → fall in material SOL in SR and LR
- Antithesis: Positive impact on material SOL
  - Investors in Europe may choose to increase investment in Asia due to worsening consumer sentiments in Europe – capital inflow to Singapore and hence improvement in BOP, AEG and reduce cyclical unemployment → increase AEG and material SOL
    - Evaluation: Slowing growth in China and Asia may also worsen MEI in the region*
  - MAS can bring about a depreciation to improve export competitiveness / jobs credit schemes to alleviate cyclical unemployment caused by fall in FDI → increase AEG and PEG → improve material SOL in SR and LR
    - Evaluation: MAS avoids depreciations as they may exacerbate imported inflation*

#### Effects of deflation in Eurozone on non-material SOL of Singapore (assuming FDI to Singapore and export revenue for Singapore falls)

- Thesis: Positive impact on non-material SOL
  - Deflation in Eurozone → reduces price of European exports → increases exports to SG → increase competition in domestic market in Singapore → reduces market dominance and supernormal profits of firms → improves equity → improves non-material SOL
  - Fall in FDI → reduce income inequality between skilled labour in industries with CA (which tend to attract FDI) and unskilled labour sunset industries
    - All in FDI to knowledge-based industries with comparative advantage in Singapore may slowdown the moving of value-added chain, and hence the winding down of sunset low-skilled industries. Hence structural unemployment abates, which prevents worsening of income gap between structurally unemployed workers and



- Fall in AEG due to fall in export volumes to Europe and fall in FDI from Europe may lead to fall in national o/p → fall in work hours and stress levels → improves non-material SOL
- Antithesis: Negative impact on non-material SOL
  - Fall in AEG due to fall in export volumes to Europe and fall in FDI from Europe may lead to fall in tax revenues for government and hence fall in ability to provide merit goods and social services → worsens non-material SOL
  - Fall in FDI to Singapore may reduce level of competition in markets and lead to market dominance → supernormal profits for local firms → worsen inequity
    - *Evaluation: Openness of Singapore economy to trade makes the market very competitive*

### Synthesis

- Key factor that determines extent of impact of Eurozone deflation on Singapore depends on exposure of economy to that of that in Eurozone (i.e. scale and direction of trade and capital flows).
- As Asian economies increasingly decouple themselves from the US and Eurozone since the Global Financial Crisis, the impact of the Eurozone deflation may become increasingly less significant for Singapore. Therefore, impact of the Eurozone deflation on SOL in SG may be overshadowed by the impact of other Asian economies, such as China which has become the largest trading partner of Singapore.

Level		Descriptors
L3	9-11	<ul style="list-style-type: none"> <li>• Well-developed explanation of how deflation in Eurozone affects trade and capital flows between Eurozone and Singapore</li> <li>• Well-developed links between the above effects and the standard of living in Singapore</li> <li>• Addressed both material <b>and</b> non-material standard of living</li> <li>• Sufficient balance of arguments – (e.g. positive vs. negative effects or long-run vs. positive effects)</li> </ul>
L2	6-8	<ul style="list-style-type: none"> <li>• Incomplete explanation of how deflation in Eurozone affects trade and capital flows between Eurozone and Singapore</li> <li>• Insufficient links between the above effects and the standard of living in Singapore</li> <li>• Addressed both material <b>or</b> non-material standard of living</li> <li>• Attempts to provide sufficient balance of arguments – (e.g. positive vs. negative effects or long-run vs. positive effects)</li> </ul>
L1	1-5	<ul style="list-style-type: none"> <li>• Serious conceptual errors</li> <li>• Answer is largely out of point</li> <li>• For a descriptive answer that is poor in or lack economic analysis</li> <li>• No attempt at providing balance</li> </ul>
E1	1-2	• Relevant stand taken but with inappropriate or inadequate justification.
E2	3-4	• Relevant stand taken with appropriate and adequate justification.

Marking Rubrics			
	Material SOL	Non-Material SOL	
Positive/SR effect	Point 1	Point 2	Max L1 = 5
Negative/LR effect	Point 3	Point 4	Max L1 = 5
Max Low L3 – 10m	Max L2 – 8m	Max L2 – 8m	Max Low L3 – 10m

3 out of 4 boxes – Max L3-10m  
 4 out of 4 boxes – Eligible for full marks



## Essay Question 6

**Explain why an economy's comparative advantage might change over time and discuss the benefits and costs brought about by globalisation to the Singapore economy. [25]**

**Suggested answer:**

### First Part

- Based on the theory of Comparative Advantage (CA), a country is able to benefit from trade by specializing in the production of a good which it has a CA, i.e.: able to produce at a lower opportunity cost compared to its trading partners
- An economy's CA might change over time due to a multitude of factors such as changes in factor endowments, government policies

#### **(i) Changes in the quality of capital and labour due to globalisation**

Globalisation brought about greater flows in capital, particularly FDI

→ Led to sharing of technology and expertise resulting in technological improvements and advancement

→ Increase in the quality and quantity of capital and labour

For example, Singapore is able to gain comparative advantage in high-tech, high skilled manufactured goods and services such as financial services and bio-medical services

→ Able to produce such goods and services at a lower opportunity cost

→ Singapore should specialize in the production of such high-tech goods and services, and export them

#### **(ii) Depletion of natural resources**

A country that used to export goods such as coal or oil could face with a depletion of its natural resources → lead to a loss of CA

For example, Brunei, a highly oil-reliant economy, is facing the prospect of losing its CA in the hydrocarbons industry, as its level of oil reserves is slowly depleting

→ need to develop new areas of CA, for e.g. in the areas of garment-making and construction related industries, such as cement and pre-cast concrete production and tourism to continue to achieve its economic objectives such as economic growth etc

#### **(iii) Changes in government policies**

Governments may also play a role in determining the type of comparative advantage the country will have. Governments may encourage the development of new comparative advantages, especially in moving up the production chain, as part of their development strategy. For example, the Singapore government plays an instrumental role in providing the availability of infrastructure and facilities such as Biopolis in developing the Biomedical industry → Able to attract foreign direct investments and produce such biomedical research services at a lower opportunity cost

## Second part

### Introduction

- Define globalisation—increased integration of economies through greater flows of trade, capital, labour and technology
- Characteristics of the Singapore economy – Small domestic market, Open to capital flows and trade, reliance on imports
- Net benefits from globalisation depends on the availability of policies to mitigate the unexpected and negative consequences of globalisation

### Explain and analyze how globalisation has affected Singapore

#### **Trade**

- With a small domestic market, Singapore cannot depend on C and I to support AD and drive economic growth → Hence, she must be export oriented and globalisation will benefit Singapore to a large extent
- With globalisation, Singapore is able to gain access to more export markets → demand for Singapore's exports rise → rise in AD → real GDP increase → national income rise by multiplier times via multiplier process and employment increase as well
- In addition, as Singapore is a small country, she is not endowed with natural resources → import reliant → With globalisation, Singapore is able to diversify our sources of imports → cushions her from adverse external shocks and increase consumer welfare (can bring a greater variety and cheaper imports)
- On the other hand, being highly globalized will make Singapore very vulnerable to external shocks and bring unexpected consequences → during 2008/09 global recession, Singapore was one of the most seriously affected nations → our exports fell significantly, leading to rapid rise in unemployment
- *The Singapore government has taken measures to reduce our susceptibility to external shocks in future. For instance, we have tried to reduce dependence on our visible trade balance by encouraging SMEs to venture overseas (increase net factor income from abroad that also could contribute to economic growth) and also restructuring towards a higher value added and knowledge based economy.*

#### **Capital & Technology**

- Globalisation will result in higher flows of capital such as FDIs between countries → the influx of FDIs also raises the level of investments as well as demand for goods and services from complementary industries such as banking, logistics and transport → the firms in complementary industries will then expand operations by increasing I to respond to a rising demand for their goods and services → this will lead to a significant rise in AD → real GDP increases → higher employment and multiplied increase in national income via multiplier process
- With higher influx of FDIs, there will be transfers of technologies and knowledge to the domestic economy → increase productivity → rise in productive capacity of the economy → rise in potential growth → increase in AS → sustained economic growth

- For a small country like Singapore with no natural resources, it is extremely challenging for us to expand AS → heavily dependent on FDIs for capacity building → globalisation brings benefits for Singapore to a very large extent
- On the other hand, being more globalized also entails higher competition for our industries → Greater need for constant restructuring and innovation → sectors that cannot compete will either relocate to more cost competitive regions or outsourcing parts of their operations → jobs will be lost as a result → workers displaced may not possess relevant skills and knowledge to take up the opportunities presented in the expanding industries → mismatch of skills and job requirements occurs → occupational immobility rises (structural unemployment)
- *However, the unexpected consequences are mitigated by the Singapore government's supply side policies → Singapore government is committed to help Singaporeans learn and upgrade through life → SkillsFuture was introduced recently to promote constant skills upgrading and retraining of workers → allows workers to always gain updated and relevant skills and knowledge required by firms → reduce occupational immobility and makes workers more employable, throughout their lives → Hence, unexpected consequences of globalisation applies to Singapore only to a small extent*

### **Labour**

- Globalisation has allowed Singapore to gain access to low wage foreign workers for industries such as construction, healthcare and F&B → allows our firms to lower their COP, making them more competitive and generates economic growth.
- Singapore is also able to attract top foreign talent and professionals → raises productivity → able to attract quality FDIs → our productive capacity will rise
- On the other hand, with an influx of cheap foreign workers, the average wage of the lower skilled local workers will be depressed. To attract top foreign talent, higher wages will have to be offered → results in rising income inequality.
- Globalisation also increases labour mobility → Singapore can suffer from brain drain as well
- *However, the Singapore government has put in place policies like the imposition of Workfare has made income inequality a less serious problem in Singapore. Workfare is a scheme that tops up low income workers' CPF accounts to ensure that essential goods and services such as healthcare and housing are always affordable and accessible. This promotes equity and reduces income inequality.*

### **Conclusion**

- Despite facing some consequences of globalisation, Singapore has always been able to weather the storms. For instance, during the 2008/09 global recession, Singapore was the first to recover and it validated the effectiveness of her government policies in mitigating the unexpected negative consequences of globalisation
- Economic data over the past few years such as sustained economic growth, low UN and healthy BOP all point to the fact that we have managed to maximize our gains from globalisation while also having in place a set of comprehensive measures to cope with the negative consequences of globalisation.

<b>Level (Marks)</b>	<b>Knowledge, Application, Understanding and Analysis</b>
L3  15 – 21	<ul style="list-style-type: none"> <li>• A well-explanation of the factors which will result in the changing comparative advantage of a country.</li> <li>• A well-developed and balanced answer (benefits and costs of globalisation) that shows strong content knowledge. The answer should have a discussion with respect to all 3 aspects of globalisation.</li> <li>• Analysis is supported with real life examples.</li> </ul>
L2  9 – 14	<ul style="list-style-type: none"> <li>• An underdeveloped explanation of the factors which will result in the changing comparative advantage of a country.</li> <li>• An elaborated one-sided answer (or 2-sided answer but briefly explained) that focuses on either the benefits or costs of globalisation.</li> <li>• Real life examples may not be used.</li> </ul>
L1  1 – 8	<ul style="list-style-type: none"> <li>• An answer that shows a brief explanation of the factors which will result in the changing comparative advantage of a country and/or effects of globalisation.</li> <li>• Some conceptual errors expected</li> </ul>
E2  3 – 4	<p>For an evaluative discussion that is based on economic analysis. Assess whether Singapore has overall benefitted from globalisation and able to make a stand as to whether the costs outweigh the benefits or the benefits outweigh the costs and why</p>
E1  1 – 2	<p>For an unexplained judgement, or one that is not supported by analysis. Merely stating that the benefits outweigh the costs or vice-versa without any clear basis.</p>